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ABSTRACT

This document contains abstracts of 121 completed studies of research and development activities in agricultural education in the United States during the period, July 1, 1976 to June 30, 1977. Twenty-six of the completed studies represent staff research; sixty-one represent master's theses, and thirty-four represent doctoral theses. The abstracts are arranged alphabetically by state and alphabetically by author within states. A subject index, utilizing ERIC descriptors, is included. Abstracts of studies reported as being in progress during 1977-78 are also compiled. They are arranged alphabetically by state and include thirty-two staff studies, seventeen master's theses, and fifteen docotral dissertations. (A list by ED-ERIC Document-number of previous summaries of studies in agricultural education concludes the document). (BM)

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# SUMMARIES OF RESEARCH AND DEVELOPMENT ACTIVITIES IN AGRICULTURAL EDUCATION

1976 - 1977

United States of America

Compiled and Edited

by

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1977

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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# PREFACE

This document represents the third annual national Summaries of Research and Development Activities in Agricultural Education in the United States of America. States not included in this compilation are encouraged to submit summaries for succeeding issues.

This compilation includes abstracts of 121 studies completed during the period, July 1, 1976 to June 30, 1977. Twenty-six of the completed studies represent staff research, 61 represent master's theses, and 34 represent doctoral theses. Studies are arranged alphabetically by state and alphabetically by author within states. A subject index, utilizing ERIC descriptors, is included.

Studies reported as being in progress during 1977-78 are also compiled. They are arranged alphabetically by state. In progress were 32 staff studies, 17 master's theses and 15 doctoral dissertations.

The compilation of Summaries of Research and Development Activities in Agricultural Education is an activity of the Research Committee of the Agricultural Education Division of the American Vocational Association. Alfred J. Mannebach of the University of Connecticut has been appointed to compile the 1977-78 report.

The location of previous Summaries of Studies compiled by region is shown at the back of this publication.

Alfred J. Mannebach

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SUMMARIES OF STUDIES, 1976-77

ARIZONA

CHRISMAN, P. Michael. "Factors Important for Effective County Extension Boards in Arizona." Master of Science Thesis, 1977, University of Arizona, Tucson.

Purposes. The purposes of this study were 1) to provide insight into factors associated with effecting County Extension Boards in Arizona, and 2) to identify and validate specific functions of County Extension Boards in Arizona as perceived by board members and County Directors.

Method. The data collected were obtained by use of mailed questionnaires sent to 14 County Extension Directors,the 95 County Extension Board members and County Extension Directors. An interview of ten selected board members from the more effective boards as identified by a "jury of experts" was also used to isolate factors associated with effective boards.

Findings. Major findings of this study were: 1) baseline date concerning Arizona's County Extension Boards, 2) validation of all 39 selected board member and chairperson functions, and 3) a checklist of factors important for effective Boards. There were no statistically significant differences between the responses of the County Directors and board members to the 39 functions. Statistical analysis also showed no significant differences between the way the board members of the more effective and less effective boards rated the functions. The County Director's attitudes toward the Board's usefulness was found to be critical. The Director must orient the members, help them elect their own officers and organize. Indirect leadership by the Director in support of the chairperson and in keeping members involved in program development was found to be important. It was found that on effective boards members more nearly assumed their responsibilities as identified on the checklist and felt that they were providing an important and useful role which was reflected in the county program.

COBB, Gareth M. "Attitudes and Perceptions of Groups of People Concerning Agricultural Mechanics." Master of Agricultural Education Report, 1977, University of Arizona, Tucson.

Purpose. The purpose of this study was to determine the attitudes and perceptions of selected target groups to job titles in agricultural mechanics.

Method. The population included students enrolled in vocational agriculture, specifically incoming freshmen and outgoing seniors. Also parents of both student groups along with persons actually employed in agricultural mechanics were included in the study. The two groups of students were used to determine the change in attitudes and perceptions towards agricultural mechanics associated with instruction in vocational agriculture and maturation. The parents were used to determine how closely the attitudes and perceptions of the students paralleled those of the parents. Those employed in agricultural mechanics were used as a "jury" for establishing the actual job characteristics and by which the accuracy of the attitudes and perceptions of the different groups could be measured. The dependent variables identified were: 1) placement opportunities and advancement potential, 2) prestige and financial reward and, 3) working conditions and training needed. The semantic differential technique with two checks was used to measure the perceptions and attitudes. The independent variables in this study were the eight selected job titles in agricultural mechanization.

Findings. Maturation and instruction in vocational agriculture did not significantly alter students' attitudes and perceptions of agricultural mechanics jobs. The parents and students displayed similar attitudes and perceptions. Neither parents nor students possessed a very accurate perception of the characteristics of the agricultural mechanics jobs as provided by industry personnel.

MILLER, Glen Michael. "A Component Analysis Study of the National FFA Agricultural Mechanics Contest." Master of Agricultural Education Report, 1977, University of Arizona, Tucson.

Purpose. The purpose of this study was to evaluate the instructional content and organization of the National FFA Agricultural Mechanics Contest in relation to needs as expressed by selected teachers of vocational agriculture in the United States.

Method. The target population of this study included six teachers of vocational agriculture in each state who were identified as leaders in the area of agricultural mechanics by state supervisors of vocational agriculture. A total of 161 teachers responded to the questionnaire.

Findings. Five skills were identified as "very important" nationally with fifty-seven skills identified as "important" and forty-four skills identified as having "some importance" nationally. Four added skills were identified as being "important" nationally. Vocational agriculture teachers ranked the skill areas of the National Agricultural Mechanics Contest from most to least importance as follows: 1) small gas engines, 2) tractor power, 3) oxyacetylene welding, 4) arc welding, 5) electricity, 6) hot and cold metal, 7) agricultural machinery, 8) carpentry construction, 9) plumbing and pipe fitting, 10) soil and water management, 11) fence construction, 12) concrete construction. A total of 91.4 percent of the teachers said the contest should include those skills and abilities identified as important nationally. In addition, 82.6 percent of the teachers said preparation of a team for the National Agricultural Mechanics Contest complements the local instructional program of vocational agriculture.

## ARKANSAS

HAYNIE, Robert C. "A Follow-Up Study of Black Students Enrolled in Youth Programs Associated with Agricultural Education in Arkansas, Prior to and Subsequent to 1965 to Determine the effectiveness of Such Youth Organizations. Thesis, Ed.D. 1976. 97 p. Library, The University of Sarasota, Sarasota, Florida. Also Library, The University of Arkansas at Pine Bluff, Pine Bluff, Arkansas.

Purpose. The purpose of this study was to determine the extent of accomplishments of black youth in NFA and FFA compared with those not participating in organized youth activities. It was also designed to measure the effectiveness of organized systematic youth activity programs, by following up former graduates of these programs prior to 1965 and subsequent to 1965.

Method. In the first step of the study, emphasis was placed on compiling a list of appropriate and specific criteria indicating measures of success. Attention was placed on the factors included in the initial questionnaire, submitted to a group of agricultural educators and others to test the validity and reliability of the factors. These educators were asked to rank the value of the specific factors. The questionnaire was reviewed and all factors with no value were eliminated. Finally, the validated questionnaire was constructed.

The second step involved the selection and random sampling of the four population groups of black students enrolled in a youth group associated with agricultural and non-agricultural education in Arkansas. The random sampling was stratified in the following manner: (1) Black students enrolled in NFA prior to 1965; (2) Black students not enrolled in a youth group prior to 1965; (3) Black students enrolled in FFA, the integrated agricultural youth group subsequent to 1965; and (4) Black youth not enrolled in FFA subsequent to 1965.

The third step involved the final construction of the validated questionnaire; preparing a cover letter; selection of NFA, FFA and non-agricultural graduates in the various areas; and distributing three hundred forty-four questionnaires to agricultural teachers and school administrators. Two hundred eighty-five questionnaires were returned. However, only one hundred ninety-three were completed and were accepted for coding.

Findings. Major findings of this study were as follows: 1. There was a difference between the effectiveness of NFA as compared with that of the FFA. The NFA graduates ranked the need and adequacy of the training they received much higher than those who graduated from FFA. They regarded the training provided for them to be directly responsible for their success in many ways. The NFA graduates presented a positive feeling because many of them were successful business, professional, and community leaders. 2. The FFA graduates held significantly more responsible community positions than the non-FFA graduates, who finished school subsequent to 1965. The study revealed that more NFA graduates were making use of their leadership training than the FFA graduates, and they were extremely satisfied with their community status.

## CONNECTICUT

MANNEBACH, Alfred J. "Internship Program in Agriculture/Agribusiness." Staff Study, 1976, University of Connecticut, Storrs.

Purpose. The major purposes of the internship program in agriculture/agribusiness were: (1) to up-date the knowledge and skills of teachers of vocational agriculture in their areas of teaching specialization and (2) to develop source units of instruction based upon the experiences obtained by the teachers enrolled in the program. Ten more detailed objectives were specified in the course outline given to the interns.

Method. The three week internship program was developed in cooperation with The Connecticut State Department of Education, Division of Vocational Education. The eleven interns were placed in jobs related to their areas of teaching specialization. One day of the first two weeks and two days of the third week were spent as a group to share experiences, to identify and prepare source units of instruction, to discuss the implications of the experiences obtained for teaching, and to complete summary sheets and evaluation forms.

Findings. Twelve source units of instruction were developed by the interns. The source units were edited, reproduced and made available to other teachers of vocational agriculture in Connecticut. Suggestions, forms and useful materials for conducting internship programs in the future were compiled in a descriptive report.

Based upon the results of the evaluations completed by the interns, the summaries of their objectives and activities, and the positive comments made, the three week internship was a valuable experience for the interns who participated. The interns recommended that the internship program be offered again in future years.

## IDAHO

McCALL, Brian Keif. "An Evaluative Study of the Small Gasoline Engine Curriculum in Idaho's Vocational Agriculture Programs." Thesis, M.S., 1976, University of Idaho, Moscow.

Purpose. (1) To determine how many of the University of Idaho graduate students and undergraduate students were utilizing the knowledge they learned from the small gasoline engine unit taught in Agricultural Mechanization 303. (2) To determine why some vocational agriculture instructors were not utilizing the knowledge they learned in the small gasoline engine unit taught in Agricultural Mechanization 303. (3) To determine how many vocational agriculture instructors have used the small gasoline engine unit as a background for preventive maintenance and repair of multicylinder engines. (4) To determine, as based on the opinion of the local high school vocational agriculture instructor, how well the local vocational agriculture high school small gasoline engine unit was accepted in the community by high school administrators, parents, local mechanics, students, and other school personnel. (5) To determine, through the local high school vocational agriculture instructor, how many of the high school students were gainfully employed as a result of the successful completion of the small gasoline engine unit at their high school. (6) To determine whether the undergraduate and inservice course in small gasoline engine repair was adequate to serve the teachers' needs. (7) To make recommendations to the instructors of Agricultural Mechanization 303 to improve the course.

Method. The data was collected by questionnaires given to high school vocational agriculture instructors in the state of Idaho. Information gathered included the following: (1) training site, (2) utilization of the training, (3) reasons for not using the training, (4) equipment and tools lacking to teach a small gasoline repair unit, (5) basis for multicylinder repair, (6) gainful student employment, (7) acceptance of the unit, and (8) additional training areas.

Findings. The majority of Idaho's high school vocational agriculture instructors stated they received their small gasoline engine training from the University of Idaho. Over 74 percent were teaching a unit in small gasoline engines, but those who were not teaching a small gasoline engine unit listed lack of tools as the major reason. The tools most often lacking were: valve grinders, small hand tools, and reboring tools. Ninety-eight percent of the vocational agriculture instructors used the small gasoline engine unit to some extent directly or as a basis for multicylinder engine repair. Of those instructors responding, 42 percent stated that many of their students had gained employment as a result of taking the high school small gasoline engine unit. The course was well accepted by students, parents and guardians, school administrators, and other school personnel.

A majority of those responding reported that skills such as electric systems calibration, review of small gasoline engine teaching material, introduction to new equipment, methods of teaching small gasoline engines, reseating valves, trouble shooting, and carburetion should be emphasized more in the University of Idaho's small gasoline engine unit.

McHARGUE, Jack M. "A Study to Develop Suitable Safety Signs Which Could be Placed on Power Equipment in Idaho Vocational Agriculture Shops." Thesis, M.S., 1977, University of Idaho, Moscow.

Purpose. (1) To compile a list of the most common types of power equipment used in Idaho vocational agriculture shops. (2) To identify the type and numbers of accidents associated with various power tools in the last five years. (3) To determine instructors' attitudes about the use of safety signs. (4) To develop suitable signs to be placed on

power equipment to emphasize its proper use and to emphasize safety hazards which may be encountered. (5) To provide each Idaho vocational agriculture instructor with a copy of the summary of this study which will include a set of patterns for safety signs which could be used on various items of power equipment.

Method. The data was obtained by use of a mail questionnaire sent to Idaho vocational agriculture instructors in January, 1977. Sixty-nine instructors responded to the questionnaire.

Findings. It was found that at the present time, only 35 percent of Idaho vocational agriculture instructors use any kind of safety signs on their power equipment. The five most common power tools found in Idaho vocational agriculture shops were: acetylene welders, arc welders, portable disc grinders, drill presses and pedestal grinders.

The five tools that Idaho vocational agriculture instructors associated with major accidents were: table saws, radial arm saws, jointers, portable circular saws and metal cut-off wheels.

The five machines that have been involved in the greatest number of accidents in the last five years in Idaho vocational agriculture shops were: acetylene welders, bench grinders, forges, arc welders, and drill presses.

The five machines that Idaho vocational agriculture instructors thought had the greatest need for safety signs were: table saws, bench grinders, drill presses, pedestal grinders, and upright band saws.

The five machines on which Idaho vocational agriculture instructors would most likely place safety signs were: drill presses, bench grinders, pedestal grinders, table saws, and power wire brushes.

An average of the number of tools found in Idaho vocational agriculture shops, the instructors' association of whether the machine would most probably be involved in a major or minor accident, the number of times each machine had been in an accident in the last five years, the instructors' determination of the need for safety signs on equipment, and the instructors' willingness to place signs on their power equipment were used to determine a priority list of tools which needed safety signs. These tools listed in order of highest priority were: table saw, acetylene welder, drill press, bench and pedestal grinders, portable disc grinder, arc welder, power wire brush, radial arm saw, portable circular saw, forge, jointer, steam cleaner, metal cut-off wheel, upright band saw, table type band saw, planer, metal lathe, wood lathe, stationary belt sander, hydraulic press, floor shear, MIG welder, TIG welder, portable ½" drill, and hydraulic jack.

SORENSEN, Jim L. "An Evaluation of Farm Shop Safety Practices Conducted in Idaho High School Vocational Agriculture Farm Mechanics Programs." Thesis, M.S., 1976, University of Idaho, Moscow.

Purpose. (1) To determine what methods Idaho vocational agriculture instructors were using to promote shop safety. (2) To determine the methods the Idaho vocational agriculture instructors preferred to use when teaching shop safety. (3) To determine the methods that the Idaho vocational agriculture farm mechanics instructors and school district administrators used to protect themselves from liability in the event of an accident in the farm mechanics shop.

Method. The data was obtained through a mail questionnaire sent to all Idaho vocational agriculture instructors in July, 1975. Fifty-eight instructors responded to the questionnaire.

Findings. Farm mechanics safety instruction is an integral part of the Idaho vocational agriculture program. Ninety percent of the instructors surveyed gave over three hours of safety instruction to students entering the shop for the first time.

The most preferred methods for teaching shop safety were in-classroom instruction and group demonstrations.

Nearly 90 percent of the departments had been inspected by the Idaho Department of Labor. Machine guards and shields and electrical outlets and wiring were the areas most often found to contain safety hazards.

The major causes of non-compliance with safety recommendations in the opinion of the instructors surveyed were lack of funds and lack of action taken by the superintendent or principal.

Accident reports were required in 63 percent of the departments surveyed. In 64 percent of these departments, the instructor and/or the student were required to sign the report.

Eighty-six percent of the Idaho vocational agriculture instructors purchased personal liability insurance. The most common source for this insurance was the Idaho Education Association. One hundred thousand dollars was the most frequently purchased amount of insurance.

Eighty-six percent of the school districts purchased liability insurance. Sixty-five percent of the vocational agriculture instructors did not know how much insurance was purchased by the district.

## ILLINOIS

LEE, MU KEUN. "Factors Associated with the Occupational and Educational Expectations of Students in the Agricultural High Schools in Korea." Thesis, Ph.D., 1977, University of Illinois, Urbana.

Purpose. To identify the occupational and educational expectations of students of agricultural high schools in Korea and to determine the factors associated with their expectations.

Method. Nine hundred and forty-five students were selected from eight agricultural high schools, located in four of nine provinces, out of the 115 agricultural high schools in Korea. Two main independent variables were occupational expectations and educational expectations. Five main dependent variables were regional and school environment variables, individual and home environment variables, variables regarding agricultural characteristics and situations, personal variables, and variables of agricultural high school education. Data were collected by mailing questionnaires which researcher developed and analyzed by SOUPAC Program using the IBM 360. Statistical techniques used for the study were discriminant analysis, analysis of variance, and Chi-Square Test.

Findings. For the 945 students, approximately 24 percent were planning to engage in farming; over 36 percent were planning to engage in agribusiness fields; and less than 23 percent were planning to engage in nonagricultural occupations. The characteristics of the students who were planning to engage in farming were that (1) they tended to decide to enter agricultural high school earlier than the students with other types of occupational

expectations, (2) they entered agricultural high school mainly because of an interest in agriculture and a desire to become established in farming, (3) they were satisfied with the job opportunities in farming, income from farming, and nature of farm work, and (4) they were influenced in their occupational expectations by their friends and their own preferences. The characteristics of the students who were planning to engage in agribusiness fields were that (1) they entered high school mainly because of job opportunities and economic problems, (2) they had the highest academic abilities among the five types of occupational expectations of students, and (3) they were satisfied with the job opportunities in agribusiness, social status of agribusiness, and income from agribusiness.

About 56 percent of the students studied expected the agricultural high school to be their highest educational attainment; 20 percent of the students studied expected to continue their education at a junior college in an agricultural field; and less than 15 percent of the students studied expected to continue their education at the 4-year college level. The characteristics of the students who expected the agricultural high schools to be their highest level of education were that (1) they tended to attend rural agricultural high schools instead of urban agricultural high schools, (2) they entered agricultural high schools mainly because of their interest in agriculture, (3) they had lower academic achievement, (4) they had many kinds of farm experiences, and (5) they were satisfied with knowledge, skills, and general education for their lives which were provided in agricultural high schools and they believed that this type of education would provide them with good job opportunities, and with opportunities for making money.

PURCELL, Arthur D. "A Study of Factors Affecting the Establishing of Young Farmer Programs in Illinois." Thesis, Ed.D., 1977, University of Illinois, Urbana.

Purpose. The overall purpose of this study was to investigate those factors that influence agricultural occupations teachers to establish young farmer programs, and to evaluate possible ways of increasing the number of young farmer programs in Illinois. In particular, information collected from teachers was used to organize, conduct and evaluate a workshop for agricultural occupations teachers designed to encourage the establishment of young farmer programs.

Method. A survey instrument containing 17 questions on adult education and young farmer programs was used to collect the data from 385 of the 444 agricultural occupations teachers in the State of Illinois. This study was divided into three phases. Phase one addressed those factors that were associated with whether or not agricultural occupations teachers had established young farmer programs in their communities. It also attempted to determine how much agricultural occupations teachers knew about young farmer programs; how they perceived such programs; and if selected characteristics were associated with the establishment of young farmer programs. Phase two utilized the results of phase one to organize a workshop on young farmer programs for agriculture teachers. Phase three included ten visits to young farmer chapters which were developed into case studies. To analyze the hypotheses, a t-test and chi-square analysis was used, and some data were presented as frequencies.

Findings. From the eight hypotheses formulated for the study, there was a significant relationship at the .05 level for three; two at the .01 level, and there was no significant relationship for the three remaining hypotheses.

In terms of the workshop, it provided agricultural occupations teachers with basic information on organizing and planning a young farmer program which would meet the educational needs of farmers in their respective community. Also, the respondents indicated their primary reasons for not organizing a young farmer program as lack of time, too busy, working with other planned activities, and a strong Farm Bureau Young Farmer Program in their community.

## INDIANA

MOORE, Gary E. "Effects of Selected Feedback Modes on Student Learning and Use of Faculty Time in Agricultural Education Classes." Staff Study, 1977, Purdue University, West Lafayette.

Purpose. The purpose of this study was to compare the effectiveness, feasibility and amount of faculty time involved in providing alternative forms of feedback to students. Specifically this study compared (1) two methods of providing feedback on written assignments - the traditional written comments and cassette audio tape recorded comments; and (2) two methods of providing feedback on examinations - the traditional written comments and latent image comments.

Method. Fifty-six students were involved in the study. The students were enrolled in either Ed 240 (Introduction to Teaching Vocational Agriculture) or Ed 440 (Teaching Vocational Agriculture). Students in each class were randomly assigned to one of the following treatments: 1) audio feedback on papers and latent image feedback on exams, 2) written feedback on papers and latent image feedback on exams, 3) audio feedback on papers and written feedback on exams, 4) written feedback on papers and written feedback on exams.

The students' final grade in the course, the students' reaction to the feedback mode and the amount of faculty time required to provide feedback were used as the dependent variables. Feedback treatment groups and the instructors were used as independent variables. An independent sample t-test was the statistical test used.

Findings. The students who received the tape recorded feedback were more pleased with the manner in which they received feedback than were the students who received written feedback.

Students who received tape recorded feedback perceived the instructor to be more interested in their progress than did the students who received written feedback. Students who received tape recorded feedback believed they had a clearer understanding of what needed to be improved on their assignments.

Less time was required to provide tape recorded feedback than was required to provide written feedback. The amount of time saved by providing tape recorded feedback increased as the level of the class increased.

The grades of the students who received the tape recorded feedback were equal to the grades of the students who received extensive written feedback. However, both types of feedback improved student performance.

Latent image examinations were viewed neutrally by the students and had no effect on grades.

MOORE, Gary E. "The Projected Supply and Demand of Teacher Educators in Agriculture 1977-1981." Staff Study, 1976, Purdue University, West Lafayette and Alabama A&M University, Huntsville.

Purpose. The purpose of this study was to ascertain 1) the projected faculty needs of agricultural education departments at the university level in the United States through 1981 and 2) the projected output of doctorates with emphasis in agricultural education in the United States through 1981 who will seek employment in agricultural teacher education.

Method. A questionnaire was developed and mailed during the Spring of 1977 to the chairmen of 83 institutions in which agricultural education programs were located. Seventy-four of the institutions returned their questionnaires for a response rate of 89 percent.

Findings. Twenty-nine faculty vacancies were projected for the 1977-78 school year. Sixteen vacancies were projected for 1978-79, 11 for 1979-80, and 10 for 1980-81.

The department chairman projected that 32 people with doctorates would be available and interested in teacher education positions for the 1977-78 year. The supply for 1978-79 was projected at 38; the supply in 1979-80 was projected at 43, while the supply for 1980-81 was projected to be 47.

MOORE, Gary E. "Development of Protocol Materials for Preparing Vocational Teachers." Staff Study, 1977, Purdue University, West Lafayette.

Purpose. The purpose of this project was to develop protocol materials that can be used in the preparation of vocational teachers.

Method. A three step process was used in this project. The first step was to identify situations to be presented in the protocols. This was accomplished by reviewing the literature to determine the types of problems experienced by vocational teachers, interviewing a sample of beginning and experienced teachers, and surveying vocational teacher educators. A listing of problems encountered by vocational teachers was developed.

Developing protocol materials based upon the identified problems was step two. The protocols are in written form.

The third step was to analyze the protocols to determine the theoretical knowledge needed to solve the problem. Model solutions were developed for each protocol. The theory from several disciplines such as sociology, psychology, etc. was applied to arrive at a solution for each problem.

Findings. The following protocols were developed: 1) Classroom Management (Discipline), 2) Vocational Youth Organization Operation, 3) Public Relations, 4) Time Management for Vocational Teachers.

LEGACY, James, HOWELL, David, and RICHARDSON, William. A Model for Employment Needs Assessment in Agribusiness. Staff Study, 1977, Purdue University, West Lafayette.

Purpose. The purpose of this study is to (1) identify the types of business which employ workers at the entry level who are required to have had agricultural experiences; (2) identify the number of employees needed to fill entry level positions as replacements in agriculture related businesses who are required to have had agriculture experiences; (3) identify the number of employees needed to fill entry level positions because of expansion by agriculture related businesses; (4) develop procedures which meet the 1976 vocational acts requirement for employment needs data based on standard classifications and statistically sound procedures.

Method. The study will be a survey design utilizing mailed questionnaires and personal interviews. The participants will be chosen at random within each of 14 selected Indiana counties. State-wide employment needs will be based on projections from the sample.

Findings. This project will provide the only source for current and future employment needs assessment for entry level positions in production agriculture and agri-business firms. A second outcome is the validation of a model which can be used to periodically update the employment opportunity assessment for agriculturally related businesses. Also, plans for

Vocational and Technical Education programs can be developed in relationship to the number of students who should be trained to fill these positions.

IOWA

APPLEGET, James Allen. "Perceived Importance of Instructor Supervised Farming Program Visits in Iowa Vocational Agriculture Programs." Master of Science Thesis, 1977, Iowa State University, Ames.

Purpose. It was the purpose of this study to (1) determine elements of the supervised farming program visit vocational agriculture students and their teachers considered to be of most value to them, (2) compare the extent of importance each group placed on specific farm visitational procedures, and (3) recommend procedures and practices that would improve the quality of farming program visitation in local vocational agriculture programs.

Method. A sample of students and their vocational agriculture instructors was drawn from a list of all 12th grade vocational agriculture students in Iowa. Each student and his instructor was asked to express the degree of importance they felt toward each of 70 specific supervised farming program visitational procedures and activities on a questionnaire structured to fit each group. Items were generated for nine procedural areas pertaining to conducting supervised farming program visits; namely, scheduling, public relations, guidance, planning and goal setting, problem solving, coordination, visitation, student-parent relations development, and evaluation.

Findings. It was observed that a significant difference existed between vocational agriculture students and their instructors in how they perceived the role of the vocational agriculture instructor in conducting supervised farming program visits. It was further observed that a significant difference existed between student and instructor mean scores for seven of the nine procedural areas. Student-parent relations development procedures revealed the greatest difference between student and instructor mean scores. It was observed that this procedural area ranked third in importance among the nine procedural areas for instructors and eighthth for students. The least significant difference was observed between group means scores for scheduling procedures.

Coordination procedures were considered to be the most important of all procedural areas by both groups, however, a difference significant beyond the .01 level was observed to exist between the two group means for this procedural area. Students considered problem solving to be the least important procedural area, whereas, instructors considered scheduling procedures to be the least important.

Only one procedural area, coordination, was considered to be greater than average in importance by the student group compared to instructors who considered two procedural areas to be greater than average in importance. Those procedural areas considered to be above average by instructors were coordination and visitational procedures.

ARCHER, Thomas Michael. "Dimensions of Perceived Importance of the Problem-Solving Principle in Agriculture and Agribusiness Education." Doctor of Philosophy Dissertation, 1976, Iowa State University, Ames.

Purpose. To determine the perceived importance of the basic principle of problem-solving in agriculture and agribusiness education in secondary and post-secondary school systems in Iowa, and identify how selected factors affect the perceived importance of this basic principle.

Method. To measure the perceived importance of the problem-solving principle, an instrument was developed and mailed to eight hundred randomly selected respondents, one hundred in each of the following groups at the secondary and two-year post-secondary levels: (1) nonagricultural teachers, (2) principals, (3) board of education members, (4) state supervisors of agricultural education, (5) superintendents, (6) agricultural teacher educators, (7) senior students in high school vocational agriculture programs and freshmen and sophomore post-secondary agricultural programs, and (8) agricultural teachers. All groups surveyed were from Iowa with the exception that the state supervisors and teacher educators were nationally sampled. An 80% response was obtained.

Findings. Four of the prominent findings were: (1) the problem-solving principle was an important factor to all of the groups surveyed and thus important in the agriculture and agribusiness education, (2) there were differences in perceived importance of the problem-solving principle with the teacher educators and state supervisors rating the importance significantly higher than most of the other groups, (3) the important characteristics of the problem-solving process were that it incorporate at the same time mental and physical activity, and that students become active participants in the solution of problems, and (4) there was an underlying commonality in that the problem-solving principle was applicable to all disciplines of education.

BYLER, Bennie L. and LINDAHL, Thomas J. "Professional Education In-Service Needs of Agriculture Instructors in Iowa Post-secondary Area Vocational Schools." Staff Study, 1977, Iowa State University, Ames.

Purpose. The primary purpose of this study was to identify the professional in-service education needs of post-secondary agriculture instructors in area vocational schools.

Method. This research was basically a descriptive and comparative ex post facto study of post-secondary agriculture instructors and their department heads in Iowa post-secondary area vocational schools, which comprised the population for the study. A sample of 100 percent of the population was obtained from the identified instructors and department heads. Data were collected by administering a survey instrument to the sample during a scheduled visit by the project staff to each of the fifteen area vocational schools which offer agricultural programs. The instrument contained demographic data and a list of 105 professional education competencies arranged by competency groups. A rating scale was utilized to ascertain the in-service need for each competency and each group of competencies.

Findings. Significant differences in responses among the three staff title groups were observed for the following characteristics: years taught in current position, years secondary vo-ag teaching experience, total years teaching experience, and total years teaching experience needed for current position. All of the 105 competencies received a total mean in-service need indicator of 10.33 or above on a 22 point scale, which would suggest that all competencies are perhaps moderately important and should be considered when designing in-service programs of professional in-service education. The in-service need indicator was obtained by adding the importance ratings to the perceived need for including the competency in an in-service education program. Fifty-nine of the 105 competencies received a total mean need indicator score of 16.5 or above (upper quartile of rating scale). The most preferred method of delivering professional in-service education programs was to provide area school in-service workshops.

COLE, Richard Lee. "Importance of Selected Vocational Agriculture Teacher Occupational Tasks as Perceived by Iowa Principals and Vocational Agriculture Teachers." Doctor of Philosophy Dissertation, 1977, Iowa State University, Ames.

Purpose. To identify important occupational activities as perceived by Iowa principals and their vocational agriculture teachers, and to compare the perceptions of these groups with the perceptions of principals and their vocational agriculture teachers in a state with a low annual rate of vocational agriculture teacher turnover.

Method. To measure the perceived importance of the activities, an instrument containing 71 program activities with selected demographic data was developed and mailed to a sample of principals and vocational agriculture teachers in Iowa and Utah. Responses were received from 85 Iowa and 37 Utah pairs of principals and vocational agriculture teachers.

Findings. Prominent findings were: (1) 17.5 percent of the Iowa sample and 40.5 percent of the Utah sample originated from schools with multi-teacher vocational agriculture departments, (2) mean years of teaching experience for the Iowa teachers was 9.1 years and 14.8 years for the Utah teachers, (3) Iowa teachers felt they should spend 51.4 hours a week on the job, whereas Utah teachers felt they should spend 42.9 hours on the job during the school year, (4) teacher mean scores were higher than principal mean scores for the 71 program activities in both states, (5) Utah group mean scores were higher than the Iowa group mean scores, (6) paired t-tests between group means within each state sample revealed 37 significantly different means for the Iowa groups, whereas, for the Utah groups only 14 significant t-values were observed, (7) the low number of significant correlation coefficients derived through the paired t-tests comparisons revealed that the groups thought and responded independently of each other when rating the importance of each program activity, (8) t-tests between like groups resulted in 33 significant t-values for the principal groups and 41 significant t-values for the vocational agriculture teacher groups.

DEGNER, Richard Michael. "Perceptions of Selected Groups Toward the Philosophic Principle of Individual and Social Needs in Agriculture and Agribusiness Education in Iowa." Master of Science Thesis, 1977, Iowa State University, Ames.

Purpose. To ascertain the importance of basing curriculum content on the needs of individuals and of society in agriculture and agribusiness education programs in Iowa.

Methods. The populations of interest in this study were school board members, superintendents, principals and career education directors, agricultural teachers, other teachers, agricultural students, teacher educators, and state supervisors that were involved in or associated with secondary and post-secondary agriculture and agribusiness education programs. A random sample of 100 people were selected from the population of each of the eight groups to be included in the study.

A basic principle statement was developed for agriculture and agribusiness education in Iowa which included the individual and social needs principle. To determine the perceived importance of this principle, 24 sub-principles that illustrated the principle were generated by local agricultural teachers. These sub-principles were included in a questionnaire along with selected demographic and self-rated items and the respondents asked to respond to the importance of each sub-principle.

Findings. Mean scores for all eight groups studied were observed to be above average in importance suggesting that the individual and social needs philosophic principle was perceived to be an important component in agriculture and agribusiness education. Of the 24 sub-principles studied, the sub-principle to emphasize honesty and respect was rated most important by all respondent groups and all group mean scores indicated very much importance placed on this sub-principle. To foster family and other interpersonal relationships was rated least important among the sub-principles by all respondents.

State supervisors and teacher educators were generally similar in their perceptions of the importance of the sub-principles. These two groups generally scored sub-principles dealing with agriculture lower than did the other six groups.

HAYE, Winston. "A Model for a Leadership Development Component of Vocational Agriculture Programs in Jamaica." Doctor of Philosophy Dissertation, 1976, Iowa State University, Ames,

Purpose. The primary purpose of this study was to identify leadership activities which should be included in a leadership development model for the vocational agriculture programs in Jamaica.

Method. The researcher visited the office of the Ministry of Education located in Kingston, Jamaica. A list of the schools equipped with vocational agriculture teachers was obtained from one of the agricultural education officers. This list contained forty schools throughout the island. From this population, a stratified random sample of twelve schools was selected. The administrators selected for the study were the individuals who head the various institutions. The vocational agriculture teachers were those who head the vocational agriculture departments in the schools. An attitude scale consisting of seventy-five leadership activities was administered to the selected teachers and administrators. Interview schedules were used to collect personal and situational data.

Findings. Both teachers and administrators had a favorable attitude towards all of the leadership learning activities studied. All seventy-five activities studied could become an integral part of the vocational agriculture programs in Jamaica.

Significant differences were observed between the attitude of teachers and administrators on three of the nine categories of leadership learning activities studied, namely: earnings, savings, and investment; scholarship; and public relations.

There were no significant differences observed between the attitude of teachers and administrators among six of the nine categories of leadership learning activities studied, namely: conduct of meetings, supervised occupational experience, leadership community service, recreation, and cooperation. Both teachers and administrators gave activities related to supervised occupational experience their highest ratings. Activities related to public relations were given the lowest rating by both teachers and administrators.

HAYNES, Worth E. "Leadership Development and Goals Achievement through Occupations of Alcorn State University Agricultural Education Graduates." Doctor of Philosophy Dissertation, 1977, Iowa State University, Ames.

Purpose. The objectives of this investigation were: (1) determine the feeling of agricultural education graduates from Alcorn State University toward their present occupation as related to fulfillment of basic psychological and social needs, and (2) identify the perceived importance of and amount possessed for each selected leadership indicators.

Method. A questionnaire comprising 58 indicators, grouped according to twelve subprinciples, five measuring psychological and social needs, and seven measuring leadership ability, was developed and mailed to Agricultural Education graduates who graduated from Alcorn State University between May 1963, and September 1972. The 102 graduates response scale was used to educe the perceived importance and amount possessed for each of the leadership indicators, as well as for what the participants expected and what they perceive their occupation as providing in terms of meeting their psychological and social needs.

Findings. The prominent findings were: (1) all groups studied perceived each of the selected leadership indicators to be important both as an indicator of one's leadership ability and in their present occupation; (2) graduates perceiving indicators to be important in their occupations also perceived themselves as possessing above the average amount of ability for that indicator; (3) graduates employed by the United States Department of Agriculture perceived their occupations as providing more security and opportunities for the

fulfillment of psychological and social needs than did vocational agriculture teachers; and (4) participants employed in nonagricultural-related occupations perceived their occupations as providing significantly fewer opportunities for personal growth and utilization of personal skills than did participants employed by the United States Department of Agriculture.

HERNAN, Neil E. "Effect of Programmed Slide Instruction on Skill Development in Carpentry Courses." Master of Science Thesis, 1977, Iowa State University, Ames.

Purpose. The purpose of this study was to experimentally evaluate the effectiveness of a programmed slide-cassette series in teaching manipulative laboratory skills and classroom subject matter related to carpentry to college level students.

Method. Two slide-cassette series, one on carpentry hand tool safety and use and another on sawhorse construction, were developed. One hundred forty students enrolled in a college level carpentry course made up the population of the study. They were enrolled in 10 different class sections of 14 students per class during the Fall and Winter quarters of the 1976-77 academic year. Five randomly selected sections received instruction using the slide-cassette series. Data collected during the study were (1) eleven items on a survey pertaining to previous hand tool experience, (2) sawhorse score, (3) posttest score and (4) total instructional time. These data were treated by correlation, analysis of covariance and pooled variance t-test.

Findings. Major findings were: teaching method had no significant effect on hand tool skill development or subject matter knowledge. Teaching method had no significant effect on the total amount of instructional time. When groups were divided by high and low experience based on number of tools owned or used, previous classroom instruction and number of sawhorses constructed, the high experience group scored significantly higher on posttest and combined scores, skill development score and required significantly less time to complete the sawhorse construction laboratory. The experimental group (slide-cassette series) did score slightly higher (raw scores) on the posttest and combined unit score and also required less time to complete the sawhorse than did the control group.

LEISING, James Gilbert. "Perceptions of Selected Groups Toward the Philosophic Principle of Experience in Agriculture and Agribusiness Education in Iowa." Doctor of Philosophy Dissertation, 1976, Iowa State University, Ames.

Purpose. To determine the perceptions of educational policy-makers, teachers, and students toward the concept of experience in agriculture and agribusiness education in Iowa.

Method. The populations of interest in this study were school board members, superintendents, principals and career education directors, agricultural teachers, other teachers and agricultural students that were involved in or associated with secondary and post-secondary agriculture and agribusiness education programs in Iowa. Also, of interest was a national population of agricultural teacher educators and state supervisors. A random sample of 100 people were selected from each of the eight groups. Thus, a total of 800 people were selected for inclusion in the study.

With the assistance of an advisory committee, a basic principle statement was developed for experiential learning in agriculture and agribusiness education in Iowa. To determine the perceived importance of this experience principle, subprinciples were generated by local teachers, that when implemented, would carry out the major principle of experience in the context of local program content and educational outcomes. A total of 15 subprinciples were developed. These subprinciples were refined and stated as questionnaire items along with

selected demographic and self-rated items. Of the 800 questionnaires sent, 640 (80.0%) were returned and used in the study.

Findings. The composite mean score for the experience principle for the eight groups studied was rated with such degrees of importance to suggest that the experience principle was thought by all groups to be important in agricultural and agribusiness education programs in Iowa. State supervisor and teacher educator group means for the experience principle were observed to be the highest among all groups, whereas, the school board member group mean was observed to be the lowest.

Of the 15 subprinciples composing the experience principle studied, the subprinciple dealing with emphasizing real-life situations and experiences was observed to have the highest overall importance mean. The subprinciple dealing with providing students the opportunity to earn money through occupational experience programs was revealed to have the lowest overall importance mean for all subprinciples studied.

State supervisor and teacher educator groups tended to rate themselves more familiar with agriculture and agribusiness education programs, and in general more knowledgeable about the farm and agricultural related businesses than all other groups. The agricultural teacher group tended to rate themselves less knowledgeable about agricultural related businesses and the farm than did school board members, state supervisors and teacher educators. Respondents involved in administrative roles expressed the highest satisfaction with the role and function of the public school system, whereas, the student group expressed the lowest satisfaction with the role and function of the public school system. All groups tended to express similar satisfaction with the present agriculture and agribusiness education programs in Iowa.

LINDAHL, Thomas J. "Employment Qualifications of Post Secondary Instructors of Agriculture in Iowa Area Schools." Doctor of Philosophy Dissertation, 1977, Iowa State University, Ames.

Purpose. The purpose of this study was to determine the perceptions of present agricultural instructors and their department heads as to the background characteristics and professional competency qualifications needed by instructors of production agriculture, agricultural supply and service, agricultural power and machinery, and horticultural programs in Iowa Area Schools.

Method. A survey questionnaire was developed, field tested, and personally administered to 109 respondents in the fifteen area schools of Iowa. The population consisted of 100 percent of the potential respondents identified for this study. Respondents provided information for eight questions related to present instructor characteristics, and eleven questions relating to present instructor initial background characteristics and the perceived background characteristics needed by new qualified instructors. Staff respondents indicated their agreement or disagreement, using the certainty method, with 105 professional competencies grouped into ten categories, as needed by beginning qualified agriculture instructors. The means from this data were analyzed through the use of Chi square and analysis of variance statistics.

Findings. Present instructor characteristics revealed: over one-half of all present instructors possess a bachelor's degree, one-fourth a master's degree and about one-fourth less than a bachelor's degree; mean age of all instructors was 40 years; two-thirds of the instructors were employed into area schools directly from industry; the respondents possessed a mean of nine years related employment experience, and two and one-half years of secondary teaching experience. Perceived needs for new qualified instructors included: over one-half of the instructors indicating a need for a bachelor's degree; employment directly from industry; one year of secondary teaching experience; and three and one-half years of related employment

experience. Present instructors and staff indicated agreement with certainty that 96 of the 105 competencies were needed by new qualified instructors. Building rapport with students was the competency given the highest certainty of agreement rating. Only one competency was identified as not needed as a qualification to teach. Department heads were more certain of the need for the professional competencies to be qualified to teach than instructors, although only two competencies were significantly different. Instructors with over three years of teaching experience and related occupational experiences tended to agree with the need for the competencies with greater certainty than those instructors with less of these experiences. About seventy percent of all the present instructors suggested a need for some supervised teaching as a qualification for new instructors.

MAGILL, John William. "Perceptions of Selected Groups Toward the Philosophic Principle Entitled Interrelationships of Agriculture in Iowa Agriculture and Agribusiness Education." Master of Science Thesis, 1977, Iowa State University, Ames.

Purpose. To determine the importance of the basic principle, interrelations of agriculture, in Iowa agriculture and agribusiness education and the perceptions of education policy-makers, teachers, and students toward that principle.

Method. The populations of interest in this study were school board members, superintendents, principals, and career education directors, agricultural teachers, other teachers, and agricultural students that were involved in or associated with secondary and postsecondary agriculture and agribusiness education programs in Iowa. Also, of interest were national populations of agricultural teacher educators and state supervisors. A random sample of 100 people were selected from the population of each of the eight groups to be surveyed in this study. An advisory committee and outside consultants were used to develop a basic principle statement for agriculture and agribusiness education, which included the interrelationships of agriculture principle. Eight subprinciples were generated by local agricultural teachers that would illustrate the principle.

Findings. All groups studied perceived the interrelationships of agriculture principle to be of importance in agriculture and agribusiness education programs. The state supervisor group placed most value on the principle whereas the agricultural teacher group placed least value on this principle.

The subprinciple, stress that agriculture is more than farming, was rated most important among the subprinciples studied by all respondents; whereas the subprinciple, develop an appreciation and understanding of the interrelatedness of agriculture and world problems, was rated least important among the subprinciples by all respondents.

The subprinciple, prepare students for leadership roles in agriculture and society, was most differently rated by all groups. State supervisor responses were significantly different from the other teacher, principal, superintendent, agricultural student, and agricultural teacher responses.

In the main, it was found that those respondents who rated themselves more familiar or satisfied with agriculture and agribusiness education programs or the public school system, or were older, tended to rate the importance of the interrelationships of agriculture principles high. Conversely, those respondents that rated themselves less familiar or satisfied with agriculture and agribusiness education programs or the public school system, or were younger, tended to rate the importance of the interrelationships of agriculture principle low.

PALS, Douglas A. "Roles and Responsibilities of Selected Agencies and Groups in Providing In-service Education for Vocational Agriculture Instructors in Iowa." Doctor of

Philosophy Dissertation, 1977, Iowa State University, Ames.

Purpose. The purpose of this study was to determine the roles and responsibilities of selected agencies or groups in providing in-service education for vocational agriculture instructors in Iowa. The secondary purposes were to identify the preferred location, purposes, and motivational factors of in-service education for vocational agriculture instructors. The differences in the attitudes towards in-service education between vocational agriculture instructors and their school administrators were also determined.

Method. A mail questionnaire was sent to 238 personnel from the following eight selected agencies or groups: (1) vocational agriculture instructors, (2) agricultural industry personnel, (3) local school administrators, (4) Iowa State University College of Agriculture department heads, (5) area education agency professional development specialists, (6) area extension directors, (7) Iowa State University state extension specialists and, (8) area community/technical college agriculture department heads.

Findings. The study indicated all eight agencies or groups should have some responsibility in providing in-service education. Vocational agriculture instructors and Iowa State University College of Agriculture teaching and research staff were rated one and two respectively, in their responsibility for determining goals and objectives, and for initiating and coordinating in-service education. Respondents were asked to designate the preferred model of organizational structure for delivery of in-service education. The model having an in-service education coordinator located in the Iowa State University Agricultural Education Department was rated highest.

The local school district and State Department of Public Instruction were rated as the agencies that should have the responsibility to finance in-service education.

The most favored locations for in-service education were the university campus and the area community/technical college.

The improvement of teaching received the highest ranking by the participants as the purpose of in-service education. The study suggested the most important factor in motivating instructors to attend in-service activities was self-growth and experience.

Vocational agriculture instructors and their school administrators agreed on the following items regarding in-service education: (1) the primary purpose, (2) teacher involvement in planning, presenting, and evaluating, (3) need for a variety of activities, and (4) the granting of release time for in-service. They differed on the location for in-service education activities.

PREYER, Prince, Jr. "An Assessment of Variables Associated with the Diffusion of Safety into the Alabama Agribusiness Education Programs." Doctor of Philosophy Dissertation, 1977, Iowa State University, Ames.

Purpose. The purpose of this study was (1) to determine the degree of diffusion of safety education into the agribusiness program and (2) to relate selected variables to the diffusion of safety education.

Method. Data were collected from sixty agribusiness teachers representing a population of 238 teachers in Alabama. Data were collected by questionnaires completed by the sixty agribusiness teachers during the 1976 Alabama Annual Vocational Agribusiness Teachers Conference.

Three instruments were constructed and used to obtain data for the study: (1) a teacher open-end questionnaire, (2) a diffusion scale, and (3) a teacher innovativeness scale. Step-wise regression was used to analyze the data.

Findings. There was no significant correlation between the 12 independent variables studied and diffusion of safety education into the agribusiness program. Therefore, the 12 personal and situational variables studied have not significantly effected the diffusion of safety education into the agribusiness program in Alabama. The variables studied accounted for only 15.68 percent of the variation in the diffusion of safety education into the agribusiness program. The department's annual maintenance budget accounted for more of the variation (3.76 percent) in diffusion of safety education than any other variable. Other variables studied that accounted for more than one percent variation each in diffusion of safety education were: (1) college credits above the B.S. degree, (2) college credits in agricultural mechanics above the B.S. degree, (3) number of students using agricultural mechanics study guides, and (4) number of square feet floor space in the agricultural mechanics laboratory.

WESSON, Gregory Donald. "Attitudes of Selected Professional Personnel Toward Agriculture and Agricultural Employment." Master of Science Thesis, 1977, Iowa State University, Ames.

Purpose. To determine the attitudes of selected groups of professional people toward agriculture, farming, and agribusiness.

Method. A random sample of Iowa doctors, lawyers, professors, and ministers were selected from populations of each group. To each selected participant was mailed an instrument upon which were listed 90 attitudinal statements about farming as a way of life and as a vocation and agribusiness employment as a way of life and as a vocation. Respondents were asked to express their degree of agreement or disagreement with each item on the instrument. Responses were received from 100 individuals in each group.

Findings. Analysis of group mean scores revealed no significant differences in attitudes of the four groups studied toward agriculture as a way of life, farming as a way of life, farming as a vocation, agribusiness as a way of life, and agribusiness as a vocation.

Significant differences were observed between doctors who had the highest mean score and lawyers who had the lowest mean score for attitude toward agriculture, farming, and agriculture as a vocation.

In all comparisons, mean scores for each attitudinal area studied were well below the midpoint on the scale used to measure extent of agreement or disagreement suggesting relative low esteem placed on agricultural pursuits as a whole, farming as a way of life and as a vocation, and agribusiness employment as a way of life and as a vocation. In addition, mean scores for the doctor group were observed to be highest and the lawyer group lowest in all comparisons made among group means.

WILLIAMS, David L. "A Study of Supervised Occupational Experience (SOE) Programs of Iowa Vocational Agriculture Students." Staff Study, 1977, Iowa State University, Ames.

Purpose. This study was designed to identify selected personal characteristics of Iowa vocational agriculture students; to determine how important students thought their vocational agriculture SOE was in developing occupational abilities; and to determine how important students thought selected factors were in developing their SOE.

Method. A mail survey sent to 300 randomly selected Iowa high school seniors enrolled in vocational agriculture during the 1975-76 school year was used to collect data for the study. Respondents were grouped according to their last SOE, educational plans, occupational plans, and place of residence to test for significant differences among groups on the

importance of SOE in developing occupational abilities and the importance of factors in developing SOE.

Findings. Significant differences were observed among students with ownership, employment, and responsibility SOE on the importance of SOE in developing 13 of the 38 occupational abilities studied. Significant differences were observed among students who planned to farm, students who planned to enter off-farm agricultural occupations, and students who planned to enter non-agricultural occupations on the importance of SOE in developing 9 abilities. Students grouped by their educational plans differed significantly in their perceived importance of SOE in developing occupational abilities for only 3 abilities. Significant differences existed between students who lived on farms and students who did not live on farms on the importance of SOE in developing 6 abilities.

Significant differences were observed when students were grouped according to their last SOE on the importance of factors in developing SOE for 6 of the 18 factors studied. No significant differences existed among students grouped according to their educational plans nor their occupational plans. Significant differences existed between students who lived on farms and students who did not live on farms on the importance of factors in developing their SOE for only one factor.

## KENTUCKY

IVERSON, Maynard J. and MCGUIRE, James E. "An Analysis of Priorities Set by Vocational Agriculture Teachers in Kentucky." Staff Study, 1977, University of Kentucky, Lexington.

Purpose. This study was designed to determine the priorities held by teachers of Vocational Agriculture in Kentucky.

Method. Teachers attending the 1976 Summer Conference were asked to rate the importance of 36 professional and personal activities on a scale of 1 = not important to 5 = extremely important; optical scan sheets were utilized so that the data could be electronically processed and results announced at the last day of the Conference. Means, rankings and correlations were calculated for the different levels of experience, clientele assignments, department staffing patterns, and professional goals.

Findings. The 236 respondents represented 76 percent of the Vocational Agriculture teachers in the state. The typical respondent had three or more years of experience, taught secondary students and adults, worked in a multiple-teacher department and regarded teaching as his life's work. The majority of respondents indicated 28 of the activities were "very important" or "extremely important." Teachers in large departments, inexperienced teachers, teachers with adult and high school assignments, and those who considered teaching as a step toward a career in agriculture rated more activities "very or extremely important" than did other subgroups.

The overall ranking of activities closely resembled the findings in a 1975 study of teacher priorities in Iowa. The top-ranked activities were (in declining order): teaching high school classes, spending time with one's family, improving one's agricultural competence, supervising experience programs, and working with the FFA; the five lowest-ranked items were (in ascending order): working with the FFA alumni association, participating in KEA, working on assigned non-VoAg duties, supplementing one's income, and working with the YFA.

Teachers agreed upon the importance of 10 activities; however, significant differences existed on the remaining 26 items among the teacher subgroups. Prioritized lists of activities were developed for each teacher subgroup, based on mean responses. Recommendations were made for improving priority (role) identification, program planning and preservice/inservice education of teachers.

## MARYLAND

MITYGA, Henry Gary. "The Development and Validation of a Standardized Achievement Test in Horticulture." Doctor of Philosophy, 1976, University of Maryland, College Park.

Purpose. The objectives of the study were to develop an 80-item horticulture achievement test for use with high school students, to establish reliability and validity for the test and to establish norms for high school students of grades nine, ten, eleven, and twelve and for high school students with one, two and three years of horticultural instruction.

Method. Two 80-item tryout tests were administered to 328 high school horticulture students from selected high schools which offered a horticulture program and were within a 50 mile radius of the College Park campus of the University of Maryland. Of the two tryout tests, 168 students took one test and 159 the other. The tests were subjected to item analysis and the subsequent data were used to formulate one 80-item final test. Validity for the final test was ensured by constructing it according to a table of specifications. The final test was administered to 1,485 students in 37 schools located in seven states: Delaware, Illinois, Indiana, Maryland, New York, Ohio and Virginia. Norm groups were established for the final horticulture achievement test and were based on the following number of examinees: 129 ninth graders, 397 tenth graders, 540 eleventh graders, 406 twelfth graders, 785 students with one year of horticultural instruction, 198 students with two years of horticultural instruction, and 48 students with three years of horticultural instruction.

Findings. Based on all examinees, the following statistical indices were found for the final form of the horticulture test: mean 39.91, standard deviation 15.35, range of scores z to 79, reliability coefficient 0.93, standard error of measurement 4.06, standard error of the mean .40. The correlation coefficients for all items were found to be significant at the 0.01 level or better as determined by the t-test. The sampling procedure included only those schools which agreed to test their students. Therefore norms may not be completely representative of all horticulture students. The final horticulture achievement test appears to be sufficiently high in reliability and validity to be used as a research tool for determing the achievement of students in ornamental horticulture subject matter.

NELSON, Clifford L.; WILLETT, Percy Jr.; OWINGS, Jeffrey. "Agriculture Departments Without FFA," University of Maryland, College Park.

Purpose. The principal objective of the study was to determine the characteristics of vocational agriculture programs and their teachers that do not have FFA chapters.

Method. A mail questionnaire and follow up phone calls were used to collect data. Usable responses were received from 175 teachers. Some returns not usable because the schools were special education or correctional institutions. Others were eliminated because they said they had active FFA chapters. Data were analyzed with descriptive and chi-square techniques.

Findings. A few of the major findings were: women made up a much larger percentage of teachers not having FFA chapters than is estimated for the total population, over 48% of those teachers not having FFA chapters and taught three years or less, in 31% of the schools there had been FFA chapters at one time, school time for club meetings was not available for 40% of the respondents, no respondents, almost 39% of the teachers had never been exposed or actively involved with the FFA, over 57% of the teachers expressed receptiveness to having

an FFA public relations team visit, southern region teachers were significantly more receptive to a public relations team than were central region teachers, teachers who have taught three years or less are significantly more receptive to having an FFA public relations team visit than those who have taught more than three years, central region teachers without FFA chapters were significantly less interested in receiving information about the FFA and how to charter a chapter than teachers in other regions and significantly more teachers in the eastern and central regions have been contacted about starting chapters than in the other two regions. The need for inservice and preservice FFA instruction for career with an FFA chapter. Special effort should be made to reach beginning women teachers since many do not have FFA experience and background.

SPIELMAN, Hal R. "Personality of FFA Leaders," Master of Science, 1977, University of Maryland, College Park.

Purpose. The purpose of this study was to determine personality types of state FFA officers and chapter FFA officers and how they differed.

Method. This was an experimental study involving 38 state officers and 109 chapter officers from around the nation who attended the summer Washington Conference Programs sponsored by the National FFA Organization during four weeks in 1976. Randomly selected students were given the Myers-Briggs Type Indicator, Form F and a demographic information sheet. The instrument measured individuals on four scales: extraversion/introversion, sensing/intuition, thinking/feeling and judgment/perception. The answer sheets were sent to Center for Application of Psychological Type, Gainesville, Florida, for computer scoring. The SPSS crosstabulation program was used to analyze the data at the University of Maryland.

Findings. Major findings of this study were as follows: chapter officers were significantly more likely to be sensing than state officers, chapter officers had significantly greater probability of being introverted-intuitive than state officers, state officers had significantly greater probability of being extroverted-intuitive, chapter officers had significantly greater probability of being sensing-judging than state officers, state officers had significantly greater probability of being intuitive-perceptive than did chapter officers, chapter officers had a significantly greater probability of being sensing-thinking than a state officer and state presidents were significantly more likely to be intuitive-feeling than chapter officers. Whether the differences were the result of FFA leadership experience or the result of election of only individuals of a certain personality type to state offices was not determined. Further study is definitely needed.

## MICHIGAN

TROTTER, Eugene and HASHEY, Patsy L. "Assessment of Agriculture and Natural Resources Instructional Materials Utilization at the Elementary level in Michigan." Research Project, 1976, Michigan State University, East Lansing.

Purpose. The purpose of this research study was to determine whether elementary teachers in the State of Michigan integrate principles and practices of agriculture and natural resources into their on-going curriculum and if they do, how they do it. The objectives of the study were as follows: 1) determine teacher awareness of the educational services provided by selected agriculture and natural resources groups, associations and other appropriate sources, 2) determine teacher utilization of educational services from selected agriculture and natural resources groups, associations and other sources, 3) determine instructional mate-

rials received by teachers from selected agriculture and natural resources groups, associations and other sources, 4) determine subject areas in which teachers integrate agriculture and natural resources instructional materials, 5) informally assess teacher attitudes and opinions toward integrating agriculture and natural resources into the on-going curriculum.

Method. A questionnaire was devised for the purpose of testing research objectives. Data were collected by research personnel from 350 (a response rate of 75.27%) elementary teachers in 30 public schools during an on-site, regularly scheduled faculty meeting. All school districts in the State of Michigan fall into one of five community types: rural, town, city, urban fringe and metropolitan core. The five community types served as a basis for population stratification. The sampling fraction f=1/20 was uniformly applied across strata so that probability of selection was proportionate to size.

The Statistical Package in the Social Sciences (SPSS) was employed for computer analyses. Data were analyzed by individual stratum and as an aggregate population. Frequencies were tabulated and the chi-square tests of homogenity and independence were calculated. Post hoc procedures were applied when appropriate.

Findings. Analyses of the data indicates that elementary teachers in the survey sample are not significantly aware of agriculture and natural resources groups, associations and other appropriate sources of instructional materials. In general it was concluded that the appropriate sources of agriculture and natural resources instructional materials have not made themselves and their services known to elementary teachers. It was further concluded that elementary teachers have not sought out these organizations as sources of instructional materials. Elementary teachers appeared to be receptive towards the concept of infusing agriculture and natural resources principles and practices into their ongoing curriculum.

## MINNESOTA

BOERBOOM, James A. "An Analysis of Competencies in the Area of Field Crops." Master of Arts Colloquium Paper, 1976, University of Minnesota, St. Paul.

Purpose. To assemble a competency based curriculum guide in the area of field crops for Minnesota that follows the problem solving approach to teaching vocational agriculture.

Method. Curriculum guides from Montana, Ohio, Oklahoma, Minnesota, Iowa and South Dakota were reviewed. Educational competencies or learning skills were then assembled into units and problem areas of instruction, which would assist teachers of vocational agriculture in planning and conducting a course of study for the crops area of production agriculture. Competencies related to crop production were organized into the following units: 1) Plant Functions, 2) Corn Production, 3) Soybean Production, 4) Wheat Production, 5) Sugarbeet Production, 6) Oats Production, 7) Forage Production, 8) Other Small Grain Production, 9) Specialty Crop Production, 10) Grain Grading, 11) Soils, and 12) Irrigation. Secondary and post secondary vocational agriculture instructors responded to the competencies listed by indicating the most effective instructional setting whether classroom, shop or in the field. Instructors also indicated an instructional priority for each of the competencies and classified the competencies in an appropriate occupational cluster of agribusiness, production agriculture, or production agriculture/agribusiness. Conclusions were based on the results of the study and the review of literature.

Findings. The data presented indicated that the competencies provided a measureable student performance when written in objective terminology. The results pointed out the most effective instructional settings for each competency. The data also revealed that the high priority, average priority, and low priority instructional competencies established by secondary vocational agriculture instructors. The literature suggested that competency

based curriculum guides provided a listing of skills that were performance based. The competencies in the study were listed in order of instructional priority as established by secondary vocational instructors in Minnesota.

BUSCH, Dale Raymond. "A Comparison Study of FFA Degree Recipients and Non-Recipients Among Vocational Agriculture Graduates of St. James, Minnesota, from 1956 through 1974. Master of Science Colloquium Paper, 1975, University of Minnesota, St. Paul.

Purpose. To determine the differences between State Degree recipients and non-recipients of the same years as to present occupation, establishment in production agriculture, post-high school education, number of jobs held, geographical location and membership in community organizations. Reactions to statements concerning the value of the State Degree were also secured.

Method. A questionnaire was sent to the 123 State Degree recipients from St. James, Minnesota, that graduated between 1956 and 1974. A random sample of four graduates that did not receive the State Degree in each of the same years was also sent questionnaires. Completed forms were received from 89 percent of the State Degree recipients and 64 percent of the non-degree recipients. Both the degree and non-degree graduates were studied in five year groupings of 1956-60, 1961-65, 1966-70, and 1971-74. The data secured was then analyzed by total degree recipients, total non-degree and total vocational agriculture graduates.

Findings. Seventy-two percent of the State Degree recipients are employed in the field of agribusiness including 34 percent that are farming while 67 percent of the non-degree graduates are in agribusiness including 33 percent in a farming occupation. The State Degree farmers are significantly more established in production agriculture than are the non-degree farmers. State Degree graduates have held substantially fewer jobs since graduation. More college or vocational school training has been secured by the State Degree graduates. Eighty-three percent of the State Degree graduates have had some formal education compared to 49 percent for the non-degree graduates. Sixty-nine percent of the non-degree graduates live within 20 miles of St. James while the percentage is 61 for the State Degree graduates. State Degree graduates are significantly more active in their home community as measured by membership in community organizations. The responses to the statements by all the graduates indicated they felt the FFA State Degree was meaningful and the leadership and record keeping requirments were beneficial after graduation. A continuation of the present FFA program and vocational agriculture curriculum in St. James was indicated by the study.

FIELD, William E. "Estimating the Need to Increase the Emphasis on Topics Relating to the World Food Crisis and International Agriculture in the Vocational Agricultural Curriculum." Master of Arts Colloquium Paper, 1976, University of Minnesota, St. Paul.

Purpose. It is the fundamental objective of this study to consider the receptiveness and appropriateness of attempting to increase the awareness and sensitivity of students in vocational agriculture programs to the global perspectives of agriculture and to the implications that hungry people in a world of potential plenty will have on their lives in years to come as workers in agriculture and agribusiness vocations.

Method. Two-hundred and ten secondary vocational agriculture instructors from California, Minnesota, New York and Texas were randomly selected and surveyed using a questionnaire designed to provide data on the present role of topics associated with international agriculture and world hunger in the vocational agriculture curriculum. Recent high school graduates, selected vocational agriculture instructors, agricultural educators,

general educators and four state directors of agricultural education were also surveyed or interviewed to provide input for this study. The findings of this study were descriptively presented as part of the final report.

Findings. 1) There is a strong consensus among Vo-Ag instructors that students generally lack an awareness and sensitivity to the problems and implications of an insufficient availability of food throughout the world; 2) the receptiveness of Vo-Ag instructors towards instructional materials dealing with the topics of world food production, distribution and the world food crisis is extremely high; 3) Vo-Ag instructors generally consider Vo-Ag as the most appropriate place to address issues associated with the technical problems of world food production; 4) There is a strong indication that Vo-Ag instructors who have emphasized topics associated with world agriculture have had significant impact on the decisions of their students, who have become involved with some form of international work, i.e. Peace Corps, agricultural missions, etc.

HOFER, James A. "Should Independent School District 793 Establish A Natural Resources Program?" Master of Arts Colloquium Paper, 1975, University of Minnesota, St. Paul.

Purpose. The purposes of the study was to survey the community, students, and staff regarding the need for a Natural Resources curriculum; to determine which instructional approach should be used in presenting conservation education; to determine what age groups should receive conservation education; and to provide a suggested plan for an 80 acre Natural Resources area for an elementary school.

Method. Forty teachers, 25 farmers, 25 urban residents, 15 students in primary, upper elementary, junior and senior high school served as the population for this study. All groups were randomly selected. The data was put in table form.

Findings. Teachers, farmers, non-farm residents, and students of all grade levels feel that a natural resources program must utilize community physical resources as the major instructional approach. Teachers and students rated the need for human resource personnel greater than did the farm and non-farm people. Teachers, farmers, and town residents felt that a mobile laboratory would be useful to the program but not essential. The elementary children preferred playing environmental games. All groups surveyed felt there would be some value to this approach. All groups felt that the use of media should be used for the program, but is not essential for the program. Simulated laboratory activities was rated essential by all groups but not as high as community physical resources. Teachers, farmers, town residents, and students generally agreed that natural resources should be required of every student in grades K-12. Students and farmers rated in elementary school needs lower than did the teachers and town residents. Senior high students rated the requirement at the senior high level the lowest of all groups surveyed. All groups generally agreed that an interdepartmental approach to an environmental program would be beneficial. Farmers were the only group that felt environmental problems must be solved by economic and biological decisions. All groups agreed that students should be involved in community improvement projects. Students, however, rated this activity lower than other groups surveyed. All groups agreed that teaching natural resource appreciation is a responsibility of the school. Many commented that this was also an obligation of the parent. All groups generally agreed that such a program could train students for careers in outdoor education except the farmers, who felt that such a program should remain exploratory. Teachers disagreed considerably about the time allotment for such a program. Generally K-3 should have 0-30 hours; 4-6 should have 20-50 hours; 7-9 should have 30-50 hours; and 10-12 should have 50-75 hours. Several felt the need for a 150 hour program. Water was rated the most important natural resource for the immediate geographical area by teachers. Town residents equally rated water, forestry and soil as the most important with wildlife being second. Students equally rated all areas with wildlife being slightly preferred. Elementary students indicated a preference for wildlife and forestry.

HOHENHAUS, William Edward. "Developing and Evaluating A Procedure for Identifying, Sequencing, and Determining An Instructional Environment for Competencies Needed At Various Occupational Levels in the Retail Feed Industry of Minnesota." Doctor of Philosophy Thesis, 1976, University of Minnesota, St. Paul.

Purpose. 1) Identify and validate a set of competencies for the livestock feed industry; 2) Determine the relative importance of the validated group of competencies as performed by three employment levels in the retail feed industry; 3) Develop and evaluate a procedure for sequencing selected competencies; 4) Develop and evaluate a procedure for determining who should teach each competency in terms of level and area; 5) Develop and evaluate a procedure to determine which instructional setting each competency could be learned most efficiently.

Method. A competency inventory was developed to identify the skills and knowledges required to perform adequately and efficiently on-the-job in the retail feed industry. These competencies were utilized in two survey instruments to collect data. Instrument I requested a response from employees at three occupational levels as the degree of importance of each competency for adequate performance at designated employment levels. The second instrument requested a response from managers, instructors, and administrators as to which instructional field should teach each competency, and which is the best instructional setting for instruction to take place. The instruments were administred by personal interview. The data were collected and descriptive statistics were used on the sample to answer the questions raised in this study. Means were calculated for each respondent group to identify the importance placed on each competency for performance at his occupational level. Frequency distributions were tabulated and Chi Square values were used to test the comparisons between the respondent groups. The rank of each competency within each respondent group and betweeen groups was determined by the calculation of their mean ranks. Kendall's Coefficient of Concordance was used to calculate the correlation of judges responses within and between groups.

Findings. The study appeared to identify a comprehensive competency list for the feed industry as shown by the importance rating given each competency by the various respondent groups at their employment level. The significant differences of opinion as to the degree of importance for each competency needed to perform adequately at an occupational level was in the comparisons between laborers and their superiors. An individual on-the-job has a tendency to give a higher estimate of the importance of competencies used on-the-job compared to the rating of the same job by another person in the business but not in the same job. The moderate correlation between ranks of competencies by managers and instructors are an indication that managers in industry and program instructors tend to rank instructional units in the same sequence. Also, the derived sequence has implications for the question as to which level of instructional competency should be taught or which are prerequisite to others. The administrators and instructors agreed in their response as to which instructional field should teach each competency. These findings identify a high similarity by administrators and instructors in making judgment as to who should teach each competency. The frequency distribution pertaining to the most effective setting for each competency to be taught supports a combination of institutional and industrial facilities. There tends to be a high degree of similarity between managers and instructors judgment.

KLEENE, Marvin D. "Teaching Strategies Based On An Analysis of Profitability Factors From Selected Farming Types in the Minnesota Vocational Agriculture Farm Management Education Program." Doctor of Philosophy Thesis, 1977, University of Minnesota, St. Paul.

Purpose. The objectives of this study were: a) to determine the relationship of profitability factors to labor earnings by farm enterprise on an annual basis; b) to examine the consistency of the relationship of profitability factors to labor earnings over a period of four years; c) to develop teaching strategies which will aid in classroom and on-farm instruction in the management education program utilizing the information derived from the analysis of the two previous objectives.

Method. Data on 7,138 specialized farming type records, 1972-1975, from the Minnesota Vocational Agriculture Farm Management Education Program was analyzed. The major criteria for selecting the specialized farm types were: 80% of whole farm earnings were derived from one farming enterprise or 80% from two enterprises with a minimum of 20% labor earnings derived from the second enterprise. This criteria established 11 specialized farm types which were examined through the use of multiple stepwise regression statistics.

Findings. There was a high degree of relationship between the profitability factors and whole farm labor earnings. This was statistically significant at the 5% level in 43 of 44 regression models analyzed. Three variables were found to have enough importance and consistency to be of practical use in an education program. These variables were: Total Work Units (business size), Index Return per $100 Feed Fed (feeding efficiency) and Gross Return per Cropped Acre. Similarities were found among important variables for three farm groups: Dairy Only, Cash Crop Only and farms containing swine enterprises. These findings were included in the "Curriculum Guide for Minnesota Vocational Agriculture Farm Management Education Program," University of Minnesota, 4th Edition, in an effort to optimize the utility of the study.

PALMER, Rodger E. "A Benefit-Cost Study of an Education Investment in Small Businesses." Doctor of Philosophy Thesis, 1976, University of Minnesota, St. Paul.

Purpose. The purpose of this study was to determine if economic benefits exceeded the participation costs for small business entrepreneurs, and for a community, enrolled in or operating a Minnesota Small Business Management Education program, with the same degree of effectiveness as the Farm Management Education program after which it was modeled.

Method. Data on net profit and gross sales was collected from 60 small businesses utilizing the business analysis in the management education program. Additional data was collected by a cost-study form and through interviews. The procedure for determining added net profit and added sales used the increase in cost of living index to adjust for inflation, in arriving at constant dollar figures.

Findings. For the 60 small business entrepreneurs enrolled in the management education program during the years of 1974 and 1975, their economic benefits exceeded their participation costs by ratios of 12.08:1 in 1974 and 11.43:1 in 1975. Assuming an enrollment of 40 students in a program, the benefit to the community exceeded community costs by the ratio of 5.52:1 in 1974, and 5.21:1 in 1975. A second economic benefit, gross sales adjusted for inflation, as a measure indicating increased business activity was calculated. Assuming an enrollment of 40 students in a program this economic benefit exceeded community costs by the ratio of 7.49:1 in 1974, and 29.77:1 in 1975. All ratios calculated exceeded those calculated in previous studies using farm management education program enrollees as the sample.

PROBASCO, Peter Merle. "Relationship of Entrepreneurs' Knowledge of Economic Principles and Their Attitudes Toward Education and Risk Taking." Doctor of Philosophy Thesis, 1976, University of Minnesota, St. Paul.

Purpose. The purpose of this study was to demonstrate that knowledge of economic principles had an economic significance to small business entrepreneurs, and that this knowledge had a greater effect on earnings than did levels of formal education. It was also hypothesized that business entrepreneurs with higher earnings had a more positive interest in their communities.

Method. Three separate instruments were used to collect data from 70 small business owner-operators in three pilot Small Business Management programs in Minnesota who enrolled for instruction for the 1974 calendar year. The instruments were: 1) NORPER Test of economic principles, 2) Attitude Inventory to measure attitudes toward education, risk taking and innovation, and 3) a Business Analysis to provide complete financial data on the business being studied.

Findings. There was no significant relationship between economic knowledge and earnings in the sample studied. This finding was in conflict with related research reported in the review of literature. The study showed that there was a correlation between attitudes toward education and management and profitability of the business. It was also demonstrated that knowledge of economic principles was more closely aligned with business profitability than were the years of formal school completed by the business operator.

RAMSE, David A. "Applying the Minnesota Extension Model for Reaching Peasant Farmers in North Mara District, Tanzania Through the Agriculture Program, Musoma Diocese." Master of Education Integrating Paper, 1977, University of Minnesota, St. Paul.

Purpose. The problem was to apply and adapt the Minnesota Extension Program Development Process to aid in planning development of a third world country's district through reaching its peasant population.

Method. Background information on the climate, people, agricultural setting, and programs of North Mara District, Tanzania, was gathered. The eight elements of the Minnesota Extension Model were applied and adapted in development of a program plan. A special effort was placed on identifying why programs fail in developing countries and the implications for planning. A sample program plan for North Mara District, Tanzania, was developed. It included a five year plan, an annual plan of work, procedures for implementation of the plan and procedures for evaluation.

Findings. Using the eight elements of the Minnesota Extension Service Program Development Process: 1) recognizing social, economic, political and educational forces; 2) understanding the extension organization; 3) identifying and involving relevant people; 4) determining their needs and goals; 5) planning a long range program; 6) preparing an annual plan of work; 7) implementing the plan, and 8) evaluating and reporting of a development program as prepared for the Diocese of Musoma Agricultural Estension Programme in North Mara District, Tanzania. The Minnesota Extension Development Process model was a useful tool in planning to reach the peasant farmers of North Mara District, Tanzania.

REISENBERG, Louis Edward. "Effectiveness of a Study Guide When Instructing Urban Horticulture Mechanics Students." Master of Arts Colloquium Paper, 1976. University of Minnesota, St. Paul.

Purpose. To test the effectiveness of a Study Guide as a means of informing students of the competencies involved in a course of study and the relative importance of each competency.

Method. A Study Guide was developed by the author as part of a curriculum project. Four existing classes of Horticulture Mechanics were the subjects of this study. Differences in achievement between the control groups and experimental groups (having access to Study Guide) were investigated and statistically treated.

Findings. No conclusive evidence was found to support the theory that access to a Study Guide would improve student achievement. No relationship was found between the student's self-reported use and value of the Study Guide and achievement. The con-

clusions reached after reviewing the results of this study are: 1) The Study Guide should be provided in other than printed form for the low-achiever; 2) Improve on the method of investigating the student's self-reported use and value of the Study Guide.

VANDER KOOI, Stanley J. "A Historical Survey of the Importance of Soil and Water Stewardship." Master of Arts Colloquim Paper, 1977. University of Minnesota, St. Paul.

Purpose. The purpose of this study was to review the Old and New Testaments in the Bible regarding Scripture teachings on the responsibilities of Christians toward the stewardship of soil, its uses, and its management. The Biblical idea of stewardship is stated in I Corinthians 4:1 and 2: "Let a man regard us in this manner, as servants of Christ, and stewards of the mysteries of God. In this case, moreover, it is required of stewards that one be found trustworthy." The main thrust is that a steward is trustworthy. Therefore, the purpose of this study was to review the literature in regard to the soil losses due to erosion or misuse. As a result of this investigation, a Biblical basis can be formulated to impact a Christian agriculturalist's values so that they will respond in a trustworthy manner when using soil.

Method. When considering a problem of this nature, the author desired to see what the Old and New Testaments in the Bible had to say about soil and water management. With the use of Bible commentaries plus some of the author's background in Hebrew and Greek, which was attained from two years of seminary study, it was sought to obtain Biblical ideas on hunger, soil conservation and use of the land. Therefore, a review of Scripture passages relating to soil and water in both the Old and New Testament was made by the author. Agricultural textbooks, publications on soil and water management and data on soil conservation practices from National and County surveys were used to provide technical information. Conclusions were based on Biblical findings and review of the literature on hunger, conservation practices and land stewardship.

Findings. The significant concepts for proper stewardship of soil and water are:
1) God is concerned about how we manage the soil. The Scripture reveals that a Christian's responsibility to use proper practices for maintaining the soil is a normal response from a faithful, trustworthy steward.
2) Since people around the world are a part of God's creation, it should be the Christian's concern that everyone has an adequate diet. The soil is expected to provide food for the people of our nation and assist other countries that do not have an adequate food base.
3) The Scriptures are clear that it is the responsibility of the Christians to lead the way in the following of good conservation practices and farming methods. God allows man to discover sound farming practices. To fail to utilize these practices is to fail in being a trustworthy steward.
4) A perusal of the literature seems to reveal that regulations are essential to check urban sprawl, highway development, and all the sundry land reserves and preserves. There must be a concern for preserving prime agricultural land for food production. Unfortunately, prime land is also ideal for housing and industrial developments.

## NEBRASKA

DILLON, Roy A. "Teacher Time - Factors Related To Its Use." Staff Study, 1976 University of Nebraska, Lincoln.

Purpose. The purpose of the study was to determine the hours worked by 40 Nebraska vocational agriculture teachers, and to compare hours worked on fifteen independent variables.

Method. Forty Nebrasks vocational agriculture teachers recorded hours worked for a one-year period, in twenty-seven duty categories.

Findings.

1. Average hours worked per month by the 40 teachers was 221, with an annual average of 2652 hours. The range was from 1833 to 4633 hours. The monthly peak was March with 301 hours averaged.
2. Thirty-one percent of the teacher's time was devoted to planning and teaching day vocational agriculture classes, 11 percent to advising and supervising FFA activities, 8 percent on curriculum planning, and 6 percent to supervising occupational experience programs. The remaining 44 percent was devoted to the remaining 23 duty categories.
3. Single teachers devoted significantly higher hours per month to public relations for the department.
4. Teachers who held a master's degree recorded significantly higher hours per month in three categories, 1) participation in national professional associations, 2) in completing official reports, and 3) participation in community activities and responsibilities.
5. Teachers with 61-90 FFA members, however, devoted significantly higher hours per month to 1) teaching non-agriculture day classes, and 2) completing award applications, than all other groups studies.
6. Twenty-six teachers who used a school-owned vehicle worked significantly higher hours per month compared to those 14 teachers who used personal vehicles.
7. 1) Teachers with 6-10 and 26 or more years teaching experience devoted significantly greater hours per month advising and supervising FFA activities, 2) teachers with 1-10 years of teaching experience devoted significantly greater hours per month to budgeting, requisitioning and inventorying, and 3) teachers with 26 or more years teaching experience had significantly greater hours per month in participation in community activities and responsibilities.
8. Teachers who were officers in professional associations worked significantly greater number of total hours per month compared to those who were not officers.
9. Teachers who did not hold a part-time job worked significantly greater number of hours per month.

## NEW JERSEY

SHEAFFER, James A. "Approved Competencies for Entry Level Arboriculture Occupations." Ed.D. Dissertation, 1976, Rutgers University, The State University of New Jersey, New Brunswick.

Purpose. The purpose of the study was the improvement of guidance and instruction in vocational-technical education in agriculture through the identification of occupations in the field of arboriculture and the competencies required for employment in the occupations. The study also identified significant differences in the importance of the identified competencies to employability among four industry interest groups.

Method. An Employer-Employee Review Group identified and approved 112 competencies associated with five occupational titles in arboriculture: 1) Trainee, 2) Groundman, 3) Climber, 4) Foreman, and 5) Manager/Superintendent. Interest groups involved in work relating to the establishment and maintenance of trees and shrubs for ornamental purposes were identified as 1) commercial arborists, 2) municipal arborists, 3) utility arborists, and 4) research and extension arborists. It was hypothesized that there would be significant differences among the four industry interest groups in the ratings given 112 competencies for the five arboricultural occupations. A questionnaire was developed to obtain ratings of the competencies and mailed to the membership of four national associations of arborists representing the interest groups. An analysis of variance among mean ratings for the 112 competencies was completed for each of the five occupations for each of the four industry interest groups. Competencies with statistically significant differences in F values among the industry interest groups were analyzed in terms of least significant differences.

Findings. There were significant differences among the four industry interest groups; 1) commercial arborists, 2) municipal arborists, 3) utility arborists, and 4) research and extension arborists, in the ratings given 112 competencies for five arboricultural occupations; 1) Trainee, 2) Groundman, 3) Climber, 4) Foreman, and 5) Manager/Superintendent. Recommendations were made relating to the use of the information derived from the study in the preparation of curriculum and materials for arboricultural occupations instruction.

## NEW YORK

AGWUBIKE, Christian C. "The Program of Agricultural Science Teacher Education at the College of Education Abraka, Bendel State of Nigeria." Master of Science Thesis, 1977, Cornell University, Ithaca, New York.

Purpose. The purpose of the study was to review the present agricultural science teacher preparation program at the College of Education Abraka, to the end of making suggestions for the improvement of the program.

Method. The problems of Agricultural Science Department were first identified and then subjected to managerial analysis, which was used as the main approach of the study. Two main sources of data were utilized. First, data and information on the existing training program were obtained from the College of Education Abraka by correspondence. Second, a panel of eight experts, carefully selected on the basis of their professional competencies, were given a number of questions addressed to the various aspects of the teacher education program. Each question was followed by several possible alternative courses of action or factors that might be considered in arriving at recommendations. They were asked to rate the importance of these alternatives and factors on a five-point scale, ranging from "Not Important" to "Absolutely Essential." Alternatives or factors with mean score of 3.0 (important) or above were considered essential for recommendation.

Findings. Twenty-four specific suggestions for improvement were made to the College administration. The following are illustrative. It was recommended that: (1) In addition to academic qualifications, the criteria to be utilized for the admission of students include -- interest in working with high school students, interest in farming, character, good health, and farming experience; (2) student teaching centers be selected on the bases of supervising teacher competence, physical facilities, and local program; (3) much needed courses be added in farm cooperatives, fishery, and the physical, biological, and social sciences; and (4) cash crops such as rubber, oil palm, and coca be grown on the college farm in addition to existing food crops.

BROWN, Richard. The Importance of Functions and Tasks Performed by Teachers of Agriculture in Farm Power. Thesis, M.S., 1977. College of Agriculture and Life Sciences at Cornell University, Ithaca, New York.

Purpose. The purpose of this study is to determine the technical knowledges, skills, and work attitudes and habits needed by a teacher of agricultural mechanization to properly train students for entry level employment in farm power and machinery dealerships.

Method. A listing of 41 functions and 421 tasks in the area of farm power were identified through a review of the literature, and assistance from university personnel and teachers of agriculture. The functions and tasks were written in performance terms.

A questionnaire was developed using a three-point rating scale, and provision made for listing additional functions and/or tasks and for coding results.

A selection panel was composed of staff from the New York State Education Department, Bureau of Agricultural Education, and teacher educators from Cornell University. A jury of 20 teachers of agricultural mechanization rated the importance level of the functions and tasks identified. Company representatives from three full-line farm machinery companies selected three of their companies' service representatives as jury members to rate the functions and tasks, bringing the total members on the jury of experts to 29.

A mail questionnaire was sent to members of the jury, and 27 of 29 (93%) of the questionnaires were returned. The rating by jury members was coded and processed through a Cornell computer to calculate the marginal frequencies and percentages and mean values for each function and task.

Findings. Of the tasks listed, only 49 (11.6%) fell below a mean value of 2.5 out of a possible 3.0. There were 36 (8.6%) of the tasks that received a mean value of 3.0 out of 3.0, indicating all the jury members felt that these 36 tasks were "essential" for teacher of agricultural mechanization.

Overall, 340 (79.8%) of the functions and tasks identified were rated between a mean score of 2.5 and 3.0, thus indicating that the jury of experts felt that the high majority of the functions and tasks listed were essential for a competent teacher of agricultural mechanization.

It was concluded that the functions and tasks identified did accurately depict those competencies needed by teachers of agricultural mechanization, and that the differences between ratings by teachers and service representatives were negligible as indicated by the high overall mean ratings.

It was recommended that similar studies be conducted to determine competencies needed in the farm machinery and pedagogical areas for teachers, and that pre-service and in-service programs of study be developed to prepare teachers to perform the functions and tasks listed in this study. It is further recommended that this study be used as a guide to determine competencies needed by teachers in related areas of instruction. Additional research is recommended to keep the functions and tasks listing up-to-date with changes made in industry.

CHOTESAWANG, Vinit. "The Technical Competencies Needed by Thai Agriculture Teachers in the Subject Matter Areas of Poultry, Swine and Cattle." Doctoral Thesis, 1977. Cornell University, Ithaca, New York.

Purpose. The purpose of this study was to: (1) identify the technical competencies needed by Thai agriculture teachers of Poultry Production, Swine Production, Feeds and Feeding, Dairy Production, and Beef Production; (2) suggest needed in-service training programs; (3) indicate changes needed in pre-service training programs; and (4) prioritize needed instructional materials.

Method. Questionnaires were utilized to obtain 10 experts' ratings of the importance of each of 242 technical competencies. In a second questionnaire, 155 teachers were requested to rate their competency for teaching each of the 239 important items. The rank order of importance of the competencies with mean teacher ratings below 4.0 (medium) was used in determining in-service training priorities. Needed changes in pre-service training programs were determined from a review of the teacher education curriculum and the lack of needed competencies in the areas being taught. Instructional materials were assigned priorities on the basis of the reverse rank order of the competencies lacked by the teacher.

Findings. Ninety-nine percent of the competencies in the five subject matter areas were found to be needed by the agriculture teachers. The distribution of competencies needed by the teachers in each area was: Poultry Production, ninety-six percent; Swine Pro-

duction, one hundred percent; and Beef Production, one hundred percent. The teachers adequately possessed only thirty-seven percent of the 239 important competencies, in the following distributions: Poultry Production, twenty-eight percent; Swine Production, forty-six percent; Feeds and Feeding, thirty-four percent; Dairy Production, thirty-eight percent; and Beef Production, forty percent.

JONES, RICHARD D. "Perceptions of Agricultural and Community Leaders as a Basis for Developing Public Relations Strategies for Agricultural Education Programs." Master of Science Thesis, 1977. Cornell University, Ithaca, New York.

Purpose. The purpose of this study was to recommend several strategies for improving public relations in agricultural education based on information gathered from local agricultural and community leaders.

Method. A sample of 35 community and agricultural leaders from four different communities in Madison County, New York was interviewed. Leaders were asked their perceptions of the FFA and agricultural education, also the information sources they use to learn about local school activities and programs.

Findings. The agricultural and community leaders represent different publics that use different information sources to learn about school activities. However, one similarity of the groups was that they all were in contact with a greater amount of mass media than the average non-leader.

Results of the interviews showed that the FFA is a highly visible organization. Individuals closely associated the FFA and vocational agriculture, but generally were more familiar with the organization than what went on in the classroom. People were particularly familiar with FFA activities that were annual in nature or involved members of the community. Perceptions of the FFA and agricultural education did not appear to be influenced by the degree of familiarity with the organization.

The study showed the importance of the teacher of agriculture in forming perceptions. Most all leaders based their favorable impression of the agriculture program on their impression of the teacher rather than having any real extensive knowledge of the effectiveness of the program.

A majority of the community leaders were unfamiliar with the skills being taught in agriculture or even the level of skills needed for most jobs related to agriculture. Emphasis on the intensive skill development in agriculture class and work experience appears to be one important area of agricultural education that should be demonstrated in public relations activities.

LOKE KENG, Wong. "The Professional Tasks of Agricultural Science Teachers in Peninsular Malaysia." Master of Science Thesis, 1977. Cornell University, Ithaca, New York.

Purpose. The purpose of this study was to establish priorities for in-service training programs and to suggest needed changes in the pre-service training programs for Agricultural Science teachers in Peninsular Malaysia.

Method. A panel of 10 jurists was contacted by mail to identify the essential professional tasks of agricultural science teachers from an instrument containing 65 tasks. These tasks were unevenly distributed over 10 major areas and were rated on a five-point scale ranging from "not important" to "absolutely essential." Professional tasks with mean scores of at least 3.0 (important) were considered essential, and were incorporated into a data collection instrument for agricultural science teachers. A questionnaire was

mailed to 120 (or twenty-three percent) of the agricultural science teachers. The teachers were requested to rate their competency on the essential tasks identified by the jury. A five-point rating scale ranging from "poor" to "excellent" was applied, and tasks rated below 3.0 (average) were considered not to be performed competently. Mean scores were calculated for the tasks. A correlation matrix was constructed to determine the feasibility of treating the sample as a whole.

Findings. Of the 65 professional tasks included in the first questionnaire, 55 (or eighty-five percent) of the items were rated by the jurists as essential. Teachers indicated that they were not competent in 19 (or thirty-five percent) of the 55 essential professional tasks. Responses from teachers who were trained after 1972 were utilized to identify changes needed in the preservice program. This group of teachers indicated that they were not competent to perform 27 (or forty-nine percent) of the essential tasks.

## OHIO

BENDER, Ralph E. "The 1976 Occupations of Recent Graduates of Vocational Agriculture in Ohio," Staff Study, 1976, The Ohio State University, Columbus.

Purpose. The purpose was to identify the occupations of one and five year graduates of vocational agriculture in Ohio as of March 1, 1976.

Method. A survey included 1,326 students of vocational agriculture of 58 departments selected at random from all of the 16 supervisory districts of vocational agriculture in Ohio.

Findings. Sixty-nine per cent of the graduates of vocational agriculture in Ohio out of school one year were in farming and non-farm agricultural occupations. The graduates out of school five years had 63 per cent so engaged. The percentage involved in agricultural occupations was the highest since the annual survey was started in 1962. Approximately 40 per cent of the graduates were farming with 60 per cent being on a full-time basis. The reasons for the increase in farming were not identified; however, it may be due to the fact that farming has been more profitable in recent years and other employment opportunities were not as available. Seventy-seven per cent of the graduates who were farming were involved on the home farm.

The percentage of graduates in non-agricultural work the first year out of school was 21 compared to 32 per cent for those out of school five years. A large portion of the occupations required aptitude and ability in mechanics. Eighteen per cent of the graduates out of school one year were in college or technical schools. Slightly over 2 per cent of the graduates were reported as being unemployed.

BENDER, Ralph E. and YODER, Edgar P. "Development and Implementation of Internship Programs in Agricultural Occupations for Present and Prospective Vocational Agriculture Teachers," USOE Project, 1976, The Ohio State University, Columbus.

Purpose. The primary purpose of this project was to develop, implement and conduct a cooperative university-industry occupational internship program for present and prospective teachers of vocational agriculture.

Method. The methods in the study included: 1)Planning an overall program with a consulting committee and selected individuals from the State Department of Education, the University, and agricultural industry personnel; 2)Assessing students' technical agricultural competence through the use of prior task analysis research; 3)Developing agreements and training plans in cooperation with students, employers, and the University coordinator; 4) conducting instructor-coordinator workshops to prepare local vocational agriculture teachers for supervision.

Findings. The project resulted in the implementation of a cooperative University-industry occupational internship program in the department. A full-time person has been employed for the purpose of coordinating the program. A total of 52 students completed internships in a variety of agricultural businesses and firms including work on farms with various enterprises. Internship policies, guidelines, procedures, and forms were developed and revised for conducting the internship program.

BRUGLER, Alan R. "The Relationship Between Academic Performance in College and the Tenure of Teachers of Vocational Agriculture." Master of Science Thesis, 1976, The Ohio State University, Columbus.

Purpose. The purpose of the study was to investigate the relationship between academic performance in college and the tenure of vocational agriculture teachers in Ohio.

Method. The sample consisted of 186 graduates of The Ohio State University for the years 1970-71 through 1973-74 who began teaching vocational agriculture as their first job upon graduation. The dependent variable was years of tenure. There were four categories of independent variables: grades in agricultural education courses and overall grade point average; grades in other professional courses required for certification; hours of professional courses completed; and instructional area taught.

Findings. No short-term relationships were found between grades in agricultural education courses or overall grade point average and the number of years taught. Also, there was no relationship between the number of courses taken or instructional area and the number of years taught. There was a positive correlation between graduate grade point average and the number of years taught. Twelve to 14 percent of the entering teachers left the profession after each of the first two years of teaching. This percentage declined as years of teaching experience increased. The primary occupations entered by former teachers were business and industry (42 percent of the teachers who left the profession) and farming (23 percent of the teachers who left teaching).

CARTER, David M., POPE, J. Thomas and McCRACKEN, J. David. "Tasks Essential to Successful Performance as a Tobacco Producer." Staff Study, 1976, The Ohio State University, Columbus.

Purpose. In order to identify the skills which were performed and essential for success as a tobacco producer, a survey was conducted to develop and validate an initial task inventory, to identify the specific tasks performed and to determine the relative importance of a specific task to successful employment as a tobacco producer. The study was limited to tasks unique to burley tobacco production, therefore, tasks essential in farm management and general crop production were excluded from the study.

Method. Duty areas and task statements for the tobacco producer were identified by searching existing task lists, job descriptions, curriculum guides and reference publications. Additionally, contacts with several tobacco farmers aided in clarifying the specific responsibilities of the tobacco producer. An attempt was made to sample practices in two different tobacco producing areas in Ohio with particular emphasis on Gallia and Adam counties. Vocational agriculture teachers, The Ohio State University and U.S. Government agency listings were used to obtain a population of tobacco producers. A sample of 45 producers was obtained. Mail questionnaires were used to obtain the data. Thirty-two of forty-five responded. A mean level of importance and a percentage of producers performing each task were calculated.

Findings. A mean number of pounds of tobacco allotment by respondents was 9,119; the mean years of experience as a producer was 22.6 years. Ninety percent of the farmers indicated they received their training on the job. Eight producers indicated they

had received their training through their high school program. Eight producers indicated they received training through adult education programs. Duty areas in which 50% or more of the tobacco producers performed the tasks were: 1) Liming and fertilizing tobacco crops, 2) Controlling weeds, insects and diseases, 3) Establishing and maintaining tobacco plant beds, 4) Setting tobacco, 5) Topping and controlling suckers, 6) Harvesting and transporting tobacco to storage, 7) Housing tobacco, and 8) Tying, marketing and shipping tobacco.

DAVIS, Kenneth D. "Academic Performance of Students Transferring from Two-Year Technical Schools to The Ohio State University College of Agriculture and Home Economics." Master of Science Thesis, 1977, The Ohio State University, Columbus.

Purpose. The study investigated the following questions: What is the academic performance of students transferring from two-year technical colleges in Ohio to a four-year degree program at The Ohio State University, College of Agriculture? What factors predict the transfer students' performance at The Ohio State University? How do transfer students from two-year programs perform academically compared to all other students in the four-year degree program in the College of Agriculture?

Method. The sample was the 48 students who transferred to The Ohio State University College of Agriculture from a two-year technical college in Ohio between Autumn quarter 1974 and Autumn quarter 1976. Data were collected from students' records at The Ohio State University.

Findings. Transfer students generally ranked in the upper one-half of their high school graduating class, scored at a level similar to other Ohio State University students on the ACT, and transferred primarily from the Agricultural Technical Institute, Wooster, Ohio. Transfer students earned an average of 76 quarter hours at the technical school and achieved a mean cumulative point-hour ratio of 2.85 (A=4.0) at the technical school. Twenty-three percent of the transfer students either dropped out or withdrew for personal or academic reasons as of Autumn quarter 1976 before completing degree requirements in the College of Agriculture. The mean percentage of credit hours transferred to The Ohio State University from the technical college was 55 percent. Seventy-two percent of the credit hours in agricultural courses was transferred; 50 percent of the credit hours in non-agricultural courses was transferred. The academic performance of the transfer students for the Autumn quarter was a 2.32 cumulative point-hour ratio; the cumulative point hour ratio for the Autumn quarter 1976 for all students enrolled in the College of Agriculture was 2.73. Rank in high school graduating class, ACT score, and point-hour ratio at the technical college were positively and significantly correlated with cumulative point-hour ratio at The Ohio State University.

DEEL, Fred J. "Attendance at Southern Ohio 4-H Camps as Related to Promotion Procedures, Personal Contacts and Perceived Value of Camping." Master of Science Thesis, 1976, The Ohio State University, Columbus.

Purpose. The purpose of this study was to find out how 4-H campers in Southern Ohio heard about 4-H camp; who influenced 4-H campers to attend 4-H camp; how campers value fun and learning at 4-H camp; what were the important reasons for attending 4-H camp; and if there were differences between 4-H campers from counties that send larger percentages of their members to camp and counties that send a lower percentage of their 4-H enrollment to 4-H camp.

Method. This study was a survey research which consisted of surveying a random sample of the 4-H campers who attended Canter's Cave 4-H Camp and Tar Hollow 4-H Camp during the summer of 1976, and the Extension Agent responsible for the camping program in each of the 14 counties that camped at these two camps.

Findings. The major conclusions of the study were: (1) Letters to 4-H members were the most effective method of informing campers of 4-H camp. (2) Friends were generally more important in older campers' decisions to attend 4-H camp while parents were more important in younger 4-H camper's decisions. (3) 4-H camp was a highly rated 4-H activity for fun and learning according to 4-H campers. (4) 'Learning new skills' and 'learning about nature' were more important in younger campers' decisions than in older campers' decisions to attend 4-H camp, while 'getting away from home' was more important for older 4-H campers. (5) There was little if any evidence to account for why some counties camp much higher percentages of their 4-H enrollment than do other counties.

ERPELDING, Lawrence H., Jr. "Status of Post-Secondary Education in Agriculture, Agribusiness, Natural Resources and Environmental Occupations, 1977." Staff Study, 1976, The Ohio State University, Columbus.

Purpose. To determine the status of post-secondary programs in agriculture, agribusiness, natural resources and environmental occupations in the United States and Puerto Rico in terms of teachers, programs and students. The data collected were to constitute a tool administrators could use to help make programmatic decisions.

Method. Department chairman in post-secondary institutions offering one and two year programs in agriculture, agribusiness, natural resources and environmental occupations were surveyed to determine the number of teachers employed, types of curricula offered and student enrollment. Data were assembled showing the number of teachers, the types of numbers of curricula, students enrolled in each program, extent of adult education offerings and number of curriculum related student organizations.

Findings. The 1977 data showed record high numbers of: institutions offering technician programs, technical education programs, institutions offering adult education programs, full and part-time faculty, and enrollment in agriculture, agribusiness, natural resources and environmental occupations programs in post-secondary education of less than baccalaureate degrees. Programs numbered 1,640 in 1977 which represented an addition of 173 compared to the previous year. Total enrollment was reported as 92,656 for an increase of 21,589 or 33% from 1976.

Department chairman stated 1,903 full-time faculty were employed in 1977. This number represented an increase of 154 fully employed instructional personnel when contrasted to the 1976 report. Part-time faculty employment grew from 1,171 in 1976 to 1,585 in 1977.

Of the 478 institutions offering less than baccalaureate post-secondary education in agriculture, agribusiness, natural resources and environmental occupations, 36% provided curriculum based student organizations. Adult education programs were offered in 179 of the 479 institutions.

FLICKINGER, Theodore B. "Crime and Law Enforcement in Ohio's State Parks." Doctor of Philosophy Dissertation, 1976, The Ohio State University, Columbus.

Purpose. The major purpose of the study was to determine the extent and nature of crime in Ohio's 62 state parks as indicated by park visitors, managers, rangers and offense/offender reports. The study also examined relationships between the number of crimes and the following variables: number of visitors, location of parks to major cities, number of acres in parks, percent of time managers and rangers devoted to law enforcement and number of campsites in state parks.

Method. The respondents were state park visitors, managers and rangers. Park visitors were randomly sampled and interviewed. All managers and 87 percent of the rangers returned questionnaires. An offense/offender form was developed by the researcher for recording park offenses and crimes.

Findings. There were 2,839 total reported offenses occurring in state parks between May 25 and September 25, 1975 of which 1,420 were crimes. Ninety-two percent of the offenders apprehended were between the ages of 10 and 29 years, with the mode being 20 years. Seventy-nine percent of the offenses were committed by male offenders, 18 percent female, and three percent were male and female together. The majority of offenders were either students, unemployed or employed in unskilled occupations. Nineteen percent of the offenders were on drugs or intoxicated. Sixty-three percent of the crimes were not cleared by apprehension of offender. Eighteen percent of the park visitors experienced crimes while visiting an Ohio state park in the last five years. Visitors stated they reported to law enforcement authorities 59 percent of all the crimes in which they were involved. Theft was the most prevalent crime accounting for over twice as many other crimes followed by vandalism, drug abuse, liquor law and weapon violations. These six areas accounted for 80 percent of all reported crimes. Most crimes occurred on weekends, 50 percent in the month of June, and during the hours of 11:00 p.m., 3:00 p.m. and 1:00 a.m., respectively. The majority of crimes occurred at campgrounds and marina/water areas. Crime preventive measures were limited in state parks and primarily focused on ranger manpower.

State park visitors are primarily from larger cities, Caucasian, averaging four members per family, with a mean annual income from $12,000 - $14,000. Twenty-nine percent of the state park visitors do not visit their city parks for fear of crime. Most visitors to Ohio's state parks would not attempt to stop a criminal. Thirty-three percent of park visitors brought self-protective weapons. The older the visitor the more likely it was that he possessed a firearm. Visitors rated the park law enforcement personnel on a scale of ten, with a mean score of eight, indicating satisfaction with the park personnel's abilities to enforce laws. It is a policy that managers and rangers do not carry firearms. The majority of park visitors believe rangers and managers should carry firearms for security and to deter crimes. Managers and rangers concur with park visitors on this issue.

The findings also revealed that a strong positive relationship existed between crimes against persons in parks within 25 miles of major cities (S.M.S.A.). There is a strong positive relationship between number of acres of land in parks and crimes against property. The strongest positive relationship existed between number of crimes and number of campsites in a park. Parks with the greatest number of campsites had the higest crime rates.

GEESEY, Richard L. "The Effect of the Type of Instructional Materials Used In Teaching Tree Identification on the Achievement of High School Vocational Agriculture Students." Doctor of Philosophy Dissertation, 1976, The Ohio State University.

Purpose. The purpose of the study was to determine the effect, in terms of students' scores on a criterion-referenced test, of the type of instructional materials used in teaching tree identification to high school students enrolled in vocational agriculture. The three levels of the treatment were: (1) a teacher's guide in combination with a student manual; (2) a student manual only; and (3) references and instructional materials normally used by the teacher in teaching tree identification.

Method. Student achievement was measured by students' scores on a sixty-five item criterion-referenced tree identification test. The sixty-five items were referenced to four student behavioral objectives. Intact classes of 21 vocational agriculture teachers in Ohio were randomly assigned to one of the three levels of the treatment providing seven classes for each group. Each teacher in all groups was provided with student behavioral objectives and a check list of trees that would be considered in the posttest. Each intact class was

randomly divided into two equivalent subgroups for pretesting purposes. One subgroup received a non-relevant pretest and the other subgroup received the actual tree identification test. The extent to which teachers used selected teaching techniques, the value they assigned the techniques, and certain descriptive characteristics of teachers were monitored and correlated with students' posttest scores. The extent to which students used tree identification instructional references provided by the teachers, students' work experience and interest in the reference materials provided was monitored and correlated with students' posttest scores.

Findings. It was concluded that: (1) the use of the student manual and the teacher's guide made no significant difference in student achievement; (2) student achievement was related in a positive direction to the extent of student use of instructional material in different learning environments, the extent of student interest generated by the use of instructional materials, the number of hours allotted by the teacher to teaching tree identification in the outdoors, the number of courses taken beyond the high school level by the teacher requiring knowledge of tree identification, the extent of use of classroom demonstrations and tests and quizzes by the teacher and the teachers' perceived value of the use of slides in classroom and laboratory presentations; and (3) student achievement was related in a negative direction to the number of hours allotted by the teacher to classroom study of tree identification, the number of teaching techniques used by the teacher in teaching tree identification, the extent of use of cassettes or reel to reel tapes prepared to be used in individual study by the student, and the teachers' perceived value of the use of cassette or reel to reel tapes prepared to be used in individual study by the student.

HAMPSON, Michael N. and McCRACKEN, J. David. "Tasks Essential to Successful Performance Within Animal Production and Management Occupations in Ohio." Staff Study, 1976, The Ohio State University, Columbus.

Purpose. In order to identify the skills which were performed and essential for success in animal production and management, a survey was conducted to develop and validate an initial task inventory identified as specific tasks performed by workers and determine the relative importance of the specific tasks to successful employment.

Method. Duty areas and task statements were occupations in animal production and management. They were identified by searching existing task lists, job descriptions, curriculum guides and reference publications. Statements were compiled for the occupations of animal health assistant, stable worker, kennel worker, dog groomer, pet shop worker, laboratory animal assistant and zoo keeper. The initial task inventory was reviewed by instructors of animal production and management programs in conjunction with their respective advisor committees. The sample for the animal health assistant occupation consisted of 100 veterinarians, randomly selected from a state directory of veterinarians. An accessible sample of 108 incumbent workers was identified for the remaining occupations by teachers of vocational agriculture enrolled in a summer workshop at The Ohio State University. The 108 incumbents were distributed in six occupational areas. Data were collected through mail survey and personal interview techniques. A total of 78 individuals responded. Frequencies and means were calculated for each task statement.

Findings. Incumbent workers in seven occupational areas had an average of 6.2 years of total work experience in their occupations, of which 5.2 years had been in their current job. The most frequent source of occupational preparation was on-the-job training. The second most frequent source was a high school training program. The 637 tasks, grouped under 48 duty areas were rated concerning whether persons performed on the job and how important that job was to their occupational success. Tasks receiving a rating above the level established by a state and national curriculum advisory committee was selected for inclusion in a curriculum guide for animal production and management occupations.

HAMPSON, Michael N., NEWCOMB, L. H. and McCRACKEN, J. David. "Essential Leadership and Personal Development Competencies Needed in Agricultural Occupations as Identified by Agricultural Leaders in Ohio." Staff Study, 1977. The Ohio State University, Columbus.

Purpose. The primary purpose of the study was to answer the research question: What are the leadership and personal development competencies needed by employees in agricultural occupations as identified by agricultural leaders in Ohio?

Method. Objectives were accomplished by constructing an initial competency inventory, validating the initial inventory, selecting a sample of agricultural leaders, collecting data from these leaders, and analyzing the data. The initial competencies were grouped into nine functional areas referred to as duties. The initial competency inventory was field-tested. Each randomly selected teacher was asked to designate an agricultural leader at the management, mid-management and labor occupational level.

This procedure produced an accessible population of 280 individuals designated by the selected vocational agriculture teachers as leaders in the teachers' respective taxonomy areas either at the management, mid-management, or labor occupational level.

Agricultural leaders were asked to indicate which leadership and personal development competencies they performed in each duty area. Then, whether or not they performed the competency, the agricultural leaders were asked to provide their perception of the level of importance of the competency to their occupation. The percent of the sample performing the competency was based on 210 cases. The sample was further broken down into three occupational levels: management (n=143), mid-management (n=29), and labor (n=38).

Findings. An analysis of the data revealed that there were no differences in performance or importance of the competencies by occupational level.

HOUK, George W. "A Case Study Analysis of Selected Agriculture Supply and Service Programs in Ohio." Master of Science Thesis, 1977. The Ohio State University, Columbus.

Purpose. The purpose of this study was to: (1) determine the strengths and weaknesses of agribusiness programs in local high schools and joint vocational schools; urban and rural settings; and one and two year programs as assessed by students, graduates, employers and school administrators, and (2) establish policy recommendation for the operation of agribusiness programs in Ohio.

Method. A series of open-ended interview items were reviewed and revised by an advisory committee comprised of agribusiness teachers and personnel from agribusiness industries, state supervision and teacher education. The project staff selected schools purposefully to include programs of the following nature: (1) a local high school junior-senior program, (2) a local high school senior year program in a district having a strong agriculture program in a joint vocational school, (3) a senior year program in a joint vocational school in a rural setting, (4) a junior-senior year joint vocational school program, (5) a senior year program in a city school system, (6) a joint vocational school program which had recently been dropped.

Interviewees were determined by using the table of random numbers. The interviewers were briefed concerning their role as interviewers and the interview procedure to be followed. Interviewee responses were summarized and case studies developed for each school studied. The project staff made observations and recommendations drawing from the case study and from the interview experience. Agribusiness program policy recommendations for each school studied and for the administration of agribusiness program in Ohio were

synthesized from project staff observations and suggestions. Policy recommendations received unanimous support by the project staff before they were included as final recommendation on this study.

Findings. Interviewees recommended that the agribusiness program in Ohio be two years in length to provide for additional technical agriculture, personal development/ human relations and basic education instruction. With very few exceptions members of all groups stated the job outlook in agribusiness was good. Students who were more active in the FFA seemed to have a more positive attitude about the agribusiness program.

Certain characteristics seemed to exist in strong programs. They included a strong public relations program, a sincere teacher concern for the students and the program, a sufficient number of training stations in agribusiness firms, appropriate school facilities and equipment, a course of study based upon community needs, and teacher input in final student selection.

Based upon all responses the major strengths of the agribusiness program included: work maturity is achieved more rapidly, on-the-job training provides realistic experience, students are allowed to leave school one-half day to work and students are given an early opportunity to choose a career. Major weaknesses cited most frequently were lack of screening for student enrollment resulting in admittance of uninterested students in agribusiness, lack of teacher input in selecting enrollment, lack of public relations activities to keep the community informed and lack of agricultural business firms in which to place students for work experience.

HOUSEHOLDER, Larry D. "Perceptions of the Role of the Local Supervisor of Vocational Agriculture." Doctor of Philosophy Dissertation, 1976, The Ohio State University, Columbus.

Purpose. The study was designed to: (1) describe and compare perceptions of local and JVS teachers of vocational agriculture, local and JVS administrators, local supervisors of vocational agriculture, and state supervisors and teacher educators in agricultural education in Ohio concerning the actual and expected role of the local supervisor of vocational agriculture, and (2) investigate the relationships between selected personal and situational characteristics of members of the participating groups and their perceptions of the actual and expected role of the local supervisor of vocational agriculture.

Method. Data were collected by mailed questionnaire from 512 of the 581 educators who qualified for the study at the end of the 1975-1976 school year with 470 providing valid data on the dependent variable. A two-part instrument was utilized by the researcher to secure needed information for the study. Part I of the instrument was designed to collect information concerning the study participants' perceptions of whether or not the local supervisor of vocational agriculture performed the supervisory tasks included in the instrument, whether or not the local supervisor should perform those tasks, at what schools in the vocational education planning districts the tasks were performed (JVS only or at both JVS and local schools), and at what schools the tasks should be performed. The 68 tasks utilized in the instrument were identified through a review of the related literature and research as being representative of the role of the local supervisors of vocational agriculture. Part II of the instrument was designed to secure data concerning the personal and situational characteristics of the study participants.

Findings. The findings revealed a general lack of consensus among the seven groups included in the study concerning the actual and expected role of the local supervisor of vocational agriculture. In relation to their perceptions of actual performance of each category of tasks, the JVS vocational agriculture teachers, JVS administrators, local

supervisors, and state supervisors perceived a high level of performance as compared to the median level perceived by the entire group of study participants. The members of the remaining groups generally perceived a lower level of performance of each category of tasks.

As for their perceptions of expected performance of each category of tasks, the local school vocational agriculture teachers and administrators expected a level of performance below the median level expected by the entire group of study participants. In contrast, the members of the remaining groups expected a higher level of performance of each category of tasks by the local supervisors.

JOHNSON, Carlton E. "Preparation for Teaching Agricultural Mechanization in the Secondary School and Vocational Institute." Faculty Research, 1976. The Ohio State University, Columbus.

Purpose. To determine whether it is possible to qualify for a teaching certificate while majoring in agricultural mechanization.

Method. Review of state specifications for a certificate in Ohio, study of course requirements for the degree in Agricultural Education and Agricultural Mechanization and Systems and synthesis of the information.

Findings. A professional certificate with specific qualifications to teach agricultural mechnization is probably required in all states, but with careful planning, can be accomplished in four years including an essential year of gainful work experience in the specialty. Details are clearly stated by the board which certifies the teacher.

JOHNSON, Carlton E. "Color Safety for Agricultural Mechanics." Faculty Research, 1976. The Ohio State University, Columbus.

Purpose. To update the knowledge of the use of color safety in agricultural shops.

Method. Review of the literature concerning the psychology of color, methods of scientifically specifying color, review of practice in the field.

Findings. Safety color standards can be specified and used in school and farm shops based on scientific and psyschological principles in selecting, specifying, and applying safety colors and lighting to enhance learning, such that when the proper readily discernible colors are used, it will result in a safe efficient response when using hand and power tools and equipment.

KEFFER, Wayne M. "Job Satisfaction of Field Staff of the Virginia Polytechnic Institute and State University Extension Division." Doctor of Philosophy Thesis, 1976. The Ohio State University, Columbus.

Purpose. To determine the relationships between selected job satisfier factors, job dissatisfier factors, and demographic variables and overall job satisfaction of field staff of the Virginia Polytechnic Institute and State University Extension Division. A Second purpose was to test Frederick Herzberg's Motivator-Hygiene Theory as related to the Extension Division field staff personnel.

Method. The study sample consisted of 30 percent of the Extension Agents and a census of the 30 district supervisory staff members of the Virginia Tech Extension Division. The 136 Extension Agents were selected by a stratified random sampling process according to the six Extension districts. Data were collected by mail questionnaires mailed to the subjects on May 20, 1976. Completed questionnaires were received from 164 of the 166 subjects.

The instrument used in the study was divided into three parts. Part I gathered information concerning levels of satisfaction on ten job satisfier/dissatisfier dimensions. Part II provided an index of overall job satisfaction. Part III sought demographic information.

The analyses of data were made in relation to the hypotheses of the study and included t-tests, one-way analyses of variance, multiple regression, and product-moment correlations. Item analysis tests were also performed on the scales used in the study.

Findings. The findings revealed that there were substantial relationships between overall job satisfaction and both job satisfier factors and job dissatisfier factors. However, the job satisfier factors were more strongly associated with overall job satisfaction than were job dissatisfier factors. The job satisfier dimensions of achievement, responsibility, the work itself, and advancement had strong linear relationships with overall job satisfaction. The fifth job satisfier dimension, recognition, had a moderate linear relationship with overall job satisfaction.

Contray to the Motivator-Hygiene Theory, the job dissatisfier factors of interpersonal relations, policy and administration, and supervision demonstrated strong linear relationships with overall job satisfaction. Multiple regression analysis confirmed Herzberg's theory that achievement was the most important job dimension in predicting overall job satisfaction.

The total job satisfier factors were found to be by far the best predictors of overall job satisfaction. Total job dissatisfiers and selected demographic variables did not significantly aid in that prediction.

Field staff of the Virginia Tech Extension Division were found generally well satisfied. Females were found somewhat more satisfied than males. Those personnel in higher level positions were better satisfied than those at lower levels. Additionally, personnel with primary responsibilities for 4-H were less satisfied than other Extension field staff.

Significant differences were found in satisfaction levels of Extension field staff by districts. Two districts consistently had the highest satisfaction levels; three grouped in the middle; and the other district consistently had the lowest satisfaction level.

Moderate U-shaped curvilinear relationships were found between job satisfaction and the demographic variables, age and length of tenure. Moderate linear relationships were found between income and performance rating and the measures of job satisfaction.

KNIGHT, James Arthur. "Why Vocational Agriculture Teachers in Ohio Leave Teaching." Doctor of Philosophy Dissertation, 1977, The Ohio State University, Columbus.

Purpose. The primary effort of this study was to identify the major reasons given by former high school teachers of vocational agriculture in Ohio for leaving teaching from the 1970-71 school year through the 1974-75 school year.

Method. A random sample of former and current teachers of vocational agriculture were surveyed. The former teachers responded on their perceptions on 45 specified factors as to the level each factor had in influencing them to leave the teaching of vocational agriculture. In addition, demographic data were gathered on both former and current teachers for comparison purposes. Eighty-six percent of the former teachers and 88 percent of the current teachers responded to the appropriate questionnaires which had been specifically developed and field tested for the two groups.

Findings. It was found that the two groups surveyed were remarkably alike. However, for the time former teachers taught, they tended to report lower salaries than the current vocational agriculture teachers who entered the profession at the same time. In addition, it was found that teachers who left tended to do so before they had taught more than three years. It was also found that current teachers tended to live close to the homes of their parents and their spouses' parents in relation to their places of employment. In fact, approximately 50 percent of those responding lived within 25 miles of their parents' home and their spouses' parents' home.

A five point rating scale from (1) none to (5) very much influence was used for the 45 factors on the research questionnaire. Five factors seemed to stand out as the most influential factors in the decision of former teachers of vocational agriculture in Ohio to leave teaching. Those five factors are as follows: (1) Long range occupational goal was something different than teaching vocational agriculture (Mean Score = 3.19); (2) Had students in class who should not have been in vocational agriculture (Mean Score = 2.96); (3) Inadequate advancement opportunities (Mean Score - 2.77); (4) Long hours (Mean Score = 2.50); and (5) Inadequate salary (Mean Score = 2.43).

LONGBRAKE, Wayne R. "Benefits and Costs of Selected Vocational Education Programs in an Area Vocational Center." Doctor of Philosophy Dissertation, 1976, The Ohio State University, Columbus.

Purpose. The major purpose of this study was to determine the benefits and costs of the vocational agricultural mechanics, machine tool, high-skill steno, and child care programs in a single area vocational center in Ohio.

Method. The initial phase of the study was to determine the nonmonetary and monetary benefits accrued by program graduates. The second phase of the study involved the determination of the total vocational program costs.

The sample of the study included all one, three, and five year graduates of the selected vocational programs located in the area vocational center. One hundred seventy-one graduates over the three-year period were identified and included in the sample.

An effort was made to describe the program graduates on the basis of selected student school-based data prior to high school graduation.

Responses to a questionnaire were used to determine the nonmonetary and monetary benefits accruing to graduates. A complete evaluation of program effectiveness required the consideration of program costs. This data included annual cost per student, program cost per class hour, cost per student hour, and total program costs. The net present value and benefit-cost ratio were calculated for individual programs. Discount rates of 6, 8, and 10 percent were assumed to be appropriate alternative opportunity investment costs for 10, 15, and 20 year time periods.

Findings. Vocational education programs were effective in terms of all indices of nonmonetary benefits. Programs were effective as measured by monetary benefits. Graduates' initial earnings were approximately equal to the minimum wage. Current gross income

for the graduates was about double their initial income, while graduates of the traditionally male vocational programs received higher gross monthly income than graduates of traditionally female programs. The net present value for all programs was greater than costs for all discount rates in the 15 and 20 year time periods. All benefit-cost ratios for individual programs except one were greater than or equal to unity for all discount rates and time periods.

REPLOGLE, Charles G. "What is the Relationship of Reasons Given for Reenrolling or Dropping Out of 4-H by First Year Members from New and Regular Audiences in Four Ohio Counties?" Master of Science Thesis, 1976, The Ohio State University, Columbus.

Purpose. The purpose of this thesis was to determine if differences existed between new and regular audience participants with regard to whether or not boys and girls reenrolled or dropped out of 4-H.

Method. Four-hundred sixty-six responses from boys and girls who were first year members in Butler, Hamilton, Montgomery and Warren Counties were obtained by school interview or mail questionnaire.

Findings. The study revealed that boys and girls from new and regular audiences do not differ with regards to their reasons for reenrolling or dropping out of 4-H, boys and girls who are members of 4-H in schools sometimes do not know they are 4-H members, and boys and girls, regardless of audience, like best about 4-H learning new skills, meeting new friends, and having fun.

STARLING, John T. "Farm Business Analysis Report of Programs Conducted by Teachers of Vocational Agriculture." Staff Study, 1976, The Ohio State University, Columbus.

Purpose. The purpose of this study was to provide farm business analysis teachers as well as teachers of agricultural production courses with some averages, relative to certain efficiency factors, which they can use in teaching classes in agricultural production to make them more realistic.

Method. Ohio teachers who were conducting Farm Business Planning and Analysis programs submitted 403 farm business summaries for computer analysis. Averages of several selected measures of performance from the farm business analyses were used to secure the date for this study.

Findings. Some of the major findings of this study were: (1) The average capital investment per farm was $209,506.00, an increase of $27,514.00 over 1975; (2) The investment in land increased approximately $20,000 per farm over 1975; (3) The average gross income per farm was $90,162.00, an increase of $13,406.00 over 1975; (4) The average net farm income was $27,486.00, an increase of $8,227.00 over 1975; (5) Things looked brighter profit-wise for the dairy farmer in 1976, increased milk price was the main helper. The price of milk increased approximately 14% while costs rose only about 5%. (6) Crop farmers also showed higher profits in 1976. High corn yields plus high soybean prices for some farmers were contributing factors. Costs of production per acre were up on both corn and soybeans; (7) Lower prices during the fall of 1976 caused a reduction in income for swine farmers, however, the more efficient producers still realized a profit. Total cost per hundred weight of pork produced increased about 15% over 1975 for swine feeding operations; (8) The picture was gloomy for both beef feeding and cow-calf operations.

TAYLOR, Calvin L. "Attitudes of the Public and Citizen Advisory Committee Members Toward Land and Water Resources in the Maumee River Basin." Doctor of philosophy dissertation, 1977, The Ohio State University, Columbus.

Purpose. The extent to which the active participants of a Citizen's Advisory Committee (CAC) were representative of the general public in land and water resource matters was examined in this investigation. Specifically, the study focused upon whether the Maumee River Basin Level B CAC members were representative of the Maumee River Basin residents of northwestern Ohio. Representativeness was examined through comparison of attitudes toward land and water resources and demographic characteristics.

Method. All 39 CAC members and a random sample of 400 residents were administered a Likert-type scale to measure their attitudes about land and water resources, the effectiveness of governmental leaders and agencies (institutions) responsible for land and water resource matters, and the role that citizens and the government should have in land and water resource decisions. Each respondent was also asked to provide demographic data. The instrument was pre-tested and then administered through three sequential waves of mail to both CAC members and the sampled public.

Findings. The general public was not as well informed as were the CAC members about the effectiveness of government leaders and agencies in land and water resource matters. The CAC members were also more critical about the effectiveness of those governmental institutions.

The demographic characteristics of the CAC members were not reflective of those of the general public. The CAC members tended to be white collar persons with higher educational achievements and higher incomes. In comparison with the general public, the CAC members were also more politically active.

It was concluded that the Maumee River Basin Level B Citizen's Advisory Committee was representative of the general public within the Basin in terms of attitudes toward land and water resources, and the role of government and the citizen in land and water resource decisions. The two groups were not alike in their attitudes toward effectiveness of governmental agencies on demographic characteristics. Although both groups responded similarly to general attitude statements, the CAC was more knowledgeable about land and water resource matters than was the general public.

VANNOSTRAN, Donald L. "Role of 4-H Committees in Ohio Counties as Perceived by 4-H Committee Members and Agents." Master of Science Thesis, 1977, The Ohio State University, Columbus.

Purpose. To assist in determining program and leadership needs, 4-H agents have used committees. These committees joined in giving direction to the 4-H program by identifying where leadership was needed to have a successful program. These committees have also assisted the extension agent in program planning and determining 4-H policy. This study deals with the role these committees have in the 4-H program.

The following objectives were guides for this study: (1) To identify the most important roles which may be expected of a 4-H committee. (2) To identify the county 4-H committee member's perception of the 4-H committee role. (3) To identify the county 4-H agent's perception of the 4-H committee's role. (4) To determine the differences between the 4-H committee members' and the 4-H agent's perception of the 4-H committee's role. (5) To determine if tenure on the committee, sex of the committee member and tenure as an advisor are related to the committee member's perception of the 4-H committee's role. (6) To determine if tenure of the 4-H agent is related to their perception of the 4-H committee's role.

Method. In order to assist in identifying the role of the 4-H committee, a questionnaire was developed identifying 34 possible tasks where 4-H committees could be involved. These tasks were then to be identified as to the importance there was for the committee or member of the committee to complete.

The population for the study included the 80 non-urban counties in Ohio. The sample consisted of two counties in each of the ten extension areas of Ohio. The committees and 4-H agents in these counties were then asked to complete the questionnaire and this information was then summarized in the study.

Findings. The following conclusions were made, based upon the findings of the study: (1) County 4-H committee members and 4-H extension agents generally agreed on the relative importance of the various task categories used in the study. (2) Committee members tended to see more importance for the various tasks than did 4-H agents, implying they were willing to accept a greater responsibility in the 4-H program than agents presently provide them. (3) Committee members with little or no 4-H advisor experience tended to see county fair and camp as important areas in which 4-H committees should function. (4) Agents and committee members felt promoting the image of 4-H was one of the highest priority tasks of the 4-H committee. (5) Planning and evaluating programs and providing a good communication system between the extension staff and volunteer leaders were important tasks for 4-H committees. (6) Low-tenured and high-tenured agents viewed the role of the 4-H committee in a similar manner.

WADDY, Paul H. Jr. "Analysis of 4-H Community Development Programs in the Cooperative Extension Service." Doctor of Philosophy Dissertation, 1976, The Ohio State University, Columbus.

Purpose. The major purposes of this study were: to describe and analyze the 4-H Community Development programs (activities and events) conducted by Extension agents or leaders through organized 4-H/CD groups at the local or county level; to determine the priority of 4-H/CD programs as perceived by Extension agents responsible for 4-H/CD groups at the county level; to describe and analyze the most important 4-H/CD activities conducted; to specify limitations and conditions involved in conducting 4-H/CD programs as perceived by Extension agents at the county level.

Method. Data were collected by mail questionnaire. Complete replies were received from one hundred seventy-seven Extension agents conducting 4-H/CD programs through organized 4-H/CD groups from thirty states.

Findings. (1) Program areas that are being conducted the most at the local or county level to develop youth understanding of community development include: leadership; public affairs and land use planning; recreation and tourism; natural resources and conservation; health; history, culture, and fine arts. (2) A large number of important 4-H/CD programs are being conducted through organized 4-H/CD groups that can be used as a model for further expansion of the 4-H/CD program. (3) Extension agents who indicated 4-H/CD programs had been conducted in their county rated program items higher than those agents who did not have the programs conducted in their county. (4) Respondents having a large number of staff members in the county rated the priority of program items higher than respondents from counties with smaller staff. (5) The priority rating of 4-H/CD program items were not related to respondents' level of education, major of last degree, years responsible for 4-H/CD programs and, years employed with Extension. (6) Four-H leaders, other agents, 4-H members, and community leaders were supportive of 4-H/CD programs at the county level. (7) Extension agents reported that there are conflicts in the process of implementing the 4-H/CD program. Some of their concerns are: Job descriptions are not clear, Extension programs were perceived as being developed from the top down, and lack of personnel at the county level to assume new responsibilities in the 4-H/CD programs.

WELLS, Ray A. "The Adoption, Use and Application of No-Tillage Corn Production in the Unglaciated Region of Southeastern Ohio." Master of Science Thesis, 1977, The Ohio State University, Columbus.

Purpose. The purpose of this research was to study the diffusion of information on new farm practices. The extent of adoption, use and application of no-tillage corn production was in 23 counties of the unglaciated soil region of Ohio. No-tillage corn production is a method of planting corn directly into a crop residue or grass sod without the use of any soil tillage. This method is well suited to the sloping soils of Eastern and Southern Ohio.

Method. The descriptive survey was employed as the basic design for this study. Data concerning the diffusion of information on new soil practices and the adoption of no-tillage corn were obtained from 245 respondents by the mail questionnaire and 31 adopters of the no-tillage corn practice by personal interviewers.

Findings. An examination of data revealed that the no-tillage corn practice was continuing to be adopted. Potential adopters of agricultural innovations can be identified by certain characteristics. Different informational sources emphasizing new farming practices were important in each of the five stages in the adoption process. Generally, the adopters were following closely the recommended practices for no-tillage corn. Overall the no-tillage corn adopters had a very positive attitude for the future of no-tillage farming methods.

YOUNG, Richare E. and CUNNINGHAM, Clarence J. "Extension Output Measures as Identified by Extension Clientele." Staff Research, 1976, The Ohio State University.

Purpose. The study had two objectives, (1) to identify, as perceived by clientele, the concrete evidences they accept as demonstrating Extension program accomplishment, and (2) to create and test a technique for obtaining from Extension clientele, valid output measures of an Extension program.

Method. The study was conducted within one Extension program area - agriculture. It involved three major steps. In the first step 48 randomly selected Ohio farmers and agribusiness persons were interviewed with the purpose of getting them to verbalize the factors they used when evaluating a county Extension agricultural program. Interviews were tape recorded and transcribed. A panel of experts then reviewed the transcripts and identified phrases which they felt respondents used as evaluative factors. Forty-four phrases or statements were identified most often and were selected for further analysis. Observations of those statements showed that 90 percent of them could be classified into the categories of methods, qualities of the agent and quality of information. In addition, it was noted that respondents seldom mentioned factors that related clearly to state or nationally developed Extension objectives.

In the second major step the 44 items were presented to a sample of 248 agricultural clientele in ten Ohio Counties. Respondents rated the extent to which each item was an important measure of the quality of Extension agricultural programs. Item analysis and factor analysis were applied to the data, resulting in an instrument of 43 items classified into the four categories of: information, Extension agents, Extension methods and educational program.

In the third major step, the instrument from step two was tested with 400 agricultural clientele in the eight counties in one Ohio Extension area. Respondents evaluated their county program by rating each of the 43 items. In addition, a panel of knowledgeable Extension professionals rated the eight county agricultural programs. Analysis

showed a tendency toward agreement (but not statistically significant) between clientele evaluations and Extension professional ratings. Further analysis showed the instrument, and its subscales to be valid and highly reliable.

Findings. The researchers feel that the technique used in developing the instrument, though complex and difficult, was worth the effort; they recommended its trial with other Extension program areas. The instrument was found to be statistically reliable and ought to be used in further Extension output studies. The items identified from the clientele interviews revealed that they apparently used highly pragmatic measures when evaluating county Extension agricultural programs; they seldon mentioned the kinds of measures that have usually been thought of by Extension professionals - increases in yields, improved economic conditions, and accomplishment of state and national objectives.

ZAINUDDIN, Alang P. "Factors Associated with Level of Participation of Members of Village Development and Security Committees in Four Peninsular Malaysian States." Doctor of Philosophy Thesis, 1977, The Ohio State University, Columbus.

Purpose. The purpose of this study was to determine the relationships of demographic, background and situational characteristics, types of cognitive factors and attitudes, and personality dispositions with the level of participation in program development activities of members of Village Development and Security Committees (VDSC's) in four Peninsular Malaysian States.

Method. One hundred and thirty respondents from 12 districts in the States of Perak, Selangor, Negeri Sembilan and Pahang were randomly selected utilizing a multi-stage probability sampling procedure. Data were collected by interviewing the respondents using a pretested interview schedule. A pretested performance questionnaire was also utilized to solicit information about VDSC members' participation level. Scales used in the study were analyzed using an item analysis procedure.

Analyses of data were made in relation to the hypotheses and included t-tests, one-way analyses of variance, product-moment correlations and multiple regression.

Findings. The study revealed that the relatively low level of participation among VDSC members in program development activities were positively associated with most of the variables selected for the study. Separate regression analyses of participation indicated that, discounting the influence of other variables, (1) the situational variables as a group accounted for three-fourths of the variance; (2) the demographic, personality and cognitive variables (as three separate groups) each explained about one-third of the variance; and (3) the attitudinal variables explained one about one-fifth of the variance. The most significant variables in the study were found to be contacts made by agency personnel and training.

The regression analysis of participation on all independent variables revealed that when all other variables were held constant, the variables contacts made by agency personnel, membership of organizations, attitudes toward VDSC, training, information sources utilization and achievement orientation were most important predictors of participation. Collectively, all 26 variables utilized in the study accounted for 83.5 percent of the variance in participation.

## OKLAHOMA

ALMOGEL, Abdulrahman Ibrahium. "An Assessment of the Present and Future Importance Attached to Selected Extension Activities for Saudi Arabia." Master of Science Report, 1976, Oklahoma State University, Stillwater.

Purpose. The purpose of the study was to determine the status of and suggest improvements for the extension services in Saudi Arabia.

Method. A questionnaire was developed and administered to students from Saudi Arabia attending Oklahoma State University during the fall semester of 1976. Data were calculated and presented in different tables.

Findings. Based on data collected, certain conclusions were made. The respondents were in general agreement that the services provided by extension workers in the present time are inadequate to meet the farmers' needs. There is a particular need to improve perceptions of the Saudi Arabian extension services among non-agricultural people. There is great need for services which can be provided by extension workers in Saudi Arabia. The service perceived as being most needed in the future is that one which deals with activities from different areas in agriculture (other services); however, all services studied are of importance for the future.

AREGAY, Berhe W. "A Review of Some Early Activities of the Soil Conservation Service of the U. S. with Implications to Ethiopia." Master of Science Report, 1977, Oklahoma State University, Stillwater.

Purpose. The purpose of the study was to examine some of the early activities of the Soil Conservation Service of the United States and to point aspects of the various programs which might be usefully transferable to the situation in Ethiopia.

Method. The methods of study applied were to: (1) review relevant literature extensively, (2) develop and administer a questionnaire to 20 Oklahoma State University staff and students, both Ethiopians and non-Ethiopians, and (3) interview resource people.

Findings. (1) Research work on various aspects of soil erosion, nationwide, (2) allocation of a share of the national financial budget to the Soil Conservation Department, (3) training of qualified personnel both at higher and lower levels were considered as extremely important in determining priority of policy implementation for the Soil Conservation Department of Ethiopia. (1) Research work on soil erosion, nationwide, and (2) making reconnaissance maps in order to identify the degree and kinds of erosion were indicated to be of extreme difficulty to implement.

The following were indicated to be the bottlenecks to successfully implement soil conservation policies and programs in Ethiopia: (1) shortage of skilled manpower, (2) lack of education of the people, (3) financial constraints, (4) lack of proper planning, (5) lack of governmental cooperation, (6) the rugged nature of the landscape and (7) lack of proper transport facilities.

BROCK, Donald Wayne. "A Comparison of Emphasis on Selected Aspects of Programs of Vocational Agriculture in Rural and Urban Areas of Texas as Perceived by Vocational Agriculture Teachers." Doctorate of Education Dissertation, 1976, Oklahoma State University, Stillwater.

Purpose. The major purpose of this study was concerned with the degree of emphasis that rural and urban agriculture teachers in Texas felt should be placed on certain aspects of the high school agriculture program.

Method. All schools which taught high school agriculture in 1975 were divided into five groups based on community size and a random stratified sampling technique was used to select a sample population of some 200 schools. A total of 167 schools located across the state participated in the survey. The data received were compiled using group consensus to determine the degree of emphasis that should be placed on leadership development, the agriculture curriculum, student selection and recruitment and public relations.

Findings. Overall, agriculture teachers in both rural and urban communities placed comparable emphasis on the three areas of the Texas program investigated in this study. However, areas of leadership training such as "Skills Teams", "Chapter Conducting" and "Farm Radio" were observed to be more highly emphasized in rural areas. Urban teachers placed more emphasis on proficiency awards and the use of advisory committees than did their rural counterparts. Programs such as "Building Our American Communities" and the establishment of an F.F.A. alumni chapter were not highly emphasized by either rural or urban groups.

Chapter public relations within the community was seen as important by both rural and urban teachers; with urban teachers placing a higher priority on the desired parental involvement in F.F.A. activities. It also should be noted that both rural and urban teachers placed more emphasis on the "recruitment of qualified male students" than qualified female students.

Re-directed programs such as "Cooperative Part-Time Training", "Meat Technology", "General Mechanics" and "Horticulture" were emphasized more by urban teachers. "Production Agriculture", while still seen as important by all groups, was more highly emphasized in communities of 2,500 or less population. The 12-month training program and the value of urban department expansion were also perceived as valuable by both groups. A similar emphasis was placed on working with adults by both rural and urban teachers.

BROWN, Donald Dean. "Suggested Operational Guidelines and Procedures for Multiple Teacher Departments of Vocational Agriculture in Oklahoma". Doctorate of Education Dissertation, 1976, Oklahoma State University, Stillwater.

Purpose. In this study an effort was made to develop suggested operational guidelines and procedures for multiple teacher departments of vocational agriculture in Oklahoma public schools.

Method. Eighteen (18) major areas of concern were identified by 48 administrators and 112 teachers in multiple teacher departments of vocational agriculture. Statements pertaining to each area of concern were formulated by teachers in a conference held at Oklahoma State University. An opinionnaire with a five-point scale was used to secure opinions of teachers in relation to the importance of each statement.

Findings. The response of teachers placed 42 statements in the category of extreme importance, 41 statements in the category of considerable importance, and 2 statements in the category of some importance.

It was concluded that teachers and administrators tend to agree on the major areas of concern in relation to the operation of multiple teacher vo-ag programs.

Teachers of vocational agriculture agree that there is a need for developing operational guidelines and procedures for use in establishing and maintaining effective programs in multiple teacher departments of vocational agriculture.

Based on the teachers' responses a suggested list of operational guidelines and procedures was developed, and are included as a major part of this study.

CEPICA, Marvin John. "A Comparison of the Summer Programs of Oklahoma Vocational Agriculture Teachers and Administrator Perceptions of Selected Aspects of the Summer Program." Doctorate of Education Dissertation, 1977, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to examine those segments which were basic to the summer program of vocational agriculture in Oklahoma and to examine administrators' opinions concerning selected portions of the summer program.

Method. Three hundred forty-six vocational agriculture teachers or 83 percent of the Oklahoma vo-ag teachers participated in the study. A questionnaire was administered at Professional Improvement meetings in order to gather needed data for the research effort. Teachers were placed into two groups, those conducting superior summer programs and all other teachers. A second questionnaire was used to measure opinions offered by a stratified sample of 60 high school administrators concerning selected aspects of the summer vocational agriculture program in Oklahoma.

Findings. Vocational agriculture teachers in Oklahoma agreed on the relative importance of groups of activities. Differences between the test groups were particularly noted in areas of the summer program involving high visibility and contact with mass audiences in which case the teachers conducting superior programs excelled other teachers in the amount of activity displayed. These areas included work with prospective students, FFA and adult meetings, field days and contests, working with the administration and agricultural agencies and publicity concerning the vocational agriculture program. The teachers agreed that work with all-day and prospective students was a number one priority during the summer. This was followed by the FFA organization and young and adult farmer work. Other areas of the program such as professional improvement, teaching aids, work with other agencies and records and reports fell lower on a list of priorities by vo-ag teachers but were regarded highly by superintendents. It was established that superintendents generally place the responsibility of the planning and conducting of the summer program with their teachers but want to be informed as to their activities. Both vo-ag teachers and administrators regarded the summer program of vocational agriculture as being highly important to the total program of vocational agriculture in Oklahoma.

FAIAZ, Javad. "An Analysis of Selected Factors Associated with Education and Occupational Choices of Iranian Agricultural Graduate Students in the United States of America." Master of Science Report, 1977, Oklahoma State University, Stillwater.

Purpose. Survey was conducted to determine the reasons and suggestions for solving the problem of the brain-drain created by Iranian agricultural students studying in the United States. The objectives sought by this study were: (1) to determine reasons why Iranian students choose to study in the U. S.; (2) to describe selected characteristics of these students (personal, family, financial, and occupational); (3) to determine problems Iranian students encounter prior to going and while in the United States; (4) to determine the former and future occupational status of the students.

Method. A questionnaire was developed based on objectives of the study and was sent to 100 Iranian agricultural graduates in ten U. S. universities. Analysis was made on the basis of 67 questionnaires which were returned.

Findings. Findings and conclusions were drawn from the study. It was found that the number of students in agriculture in Iran were fewer than those in any other field of study. The following conclusions can be read from this study: (1) six respondents (18.45 percent) were unwilling to return home; (2) 68.65 percent of the respondents sought master's, and (31.34 percent) sought doctoral degrees; (3) reasons suggested that were contributing to respondents' return to Iran were as follows: (a) due to family; (b) government scholarship; (c) due to prejudice; (d) other. The following reasons were given for not returning to Iran: (a) better standard of living; (b) availability of appropriate job; (c) living comfort; (d) low wage in Iran; (e) lower level of education in Iran; (f) problem of facing military service in Iran; (g) being married to American girls; (h) variety of living opportunities in the U.S.

HAGHIGHAT, Nasser G. "Identification and Comparison of Factors Associated with the Choice of a Research Topic in Agricultural Education by Native and Foreign Graduate Students." Master of Science Report, 1977, Oklahoma State University, Stillwater.

Purpose. The major purpose of the study was to determine selected factors which are recognized as often considered by graduate students in Agricultural Education when selecting a topic for study and research. An effort was also made to compare the choices and factors affecting those choices by American students as contrasted with foreign students.

Method. The period covered by the study included the years 1973 through 1977. The sampling totaled 48 American students and 16 foreign students. Of 48 questionnaires mailed to the American students, 36 were completed and returned. Likewise, of 16 questionnaires mailed to foreign students, 11 were returned. For both groups, returns constituted approximately 70 percent of the total population. Eighteen selected factors were submitted to respondents for a requested ranking.

Findings. It was found that both American and foreign students tend to select research areas for investigation which are close to their home situation. Apparently, the selection of research topics by foreign students is not associated as closely as that of American students to the occupation of parents. According to the factors ranked by both groups of students, it may be concluded that in general American students tend to choose research topics which appear to be more logical than do foreign students. Rankings provided by American students contrasted to foreign students (indicated in parentheses) were determined as: 1, availability of respondents (1, tie); 2, easily collectable data (1,tie); 3, familiarity with area of study (8); 4, work needed to develop the study (9); 5, tie, personal interest in problem (5, tie); 5, tie, limitation of scope (10); 7, influence of major adviser (7); 8, limitation of time (4); 9, tie, availability of related literature (5, tie); 9, tie, significance of the problem (16); 11, availability of topics (14); 12, influence of others (12, tie); 13, lower cost of making the study (3); 14, some of college courses (12, tie); 15, number of similar research (13); 16, novelty (11); 17, equipment needed (17); 18, ability of students to write (18).

HASSAN, Ahmed Haji. "Alternative Strategies for Small-Farm Development: An Empirical Approach with Focus on Somalia." Master of Science Report, 1977, Oklahoma State University, Stillwater.

Purpose. The present study was undertaken to propose alternative strategies for small-farm development which can accommodate the subsistence farmer in a technologically oriented development era.

Method. Since the early fifties, professional expressions of concern about the problem of rural development in general and the plight of the small farmer in particular in the developing countries were brought to focus by many researchers, development officers, and educators. From these investigations, certain schools of thought emerged. These included the community development school, the Green Revolution school, the integrated rural development, and the collective school of thought. Many programs were initiated but after twenty-five years, we find anxieties and disappointments in most of these approaches.

Findings. This empirical study reveals that an effective strategy invariably demands decentralization; total commitment of government is essential; new technology is a prerequisite as a means of breaking stagnation; and that identification of small farmers' needs is essential. The study concludes that what is lacking is not the technology but the necessary institutional framework in rural development which can reach the subsistence farmer. Recommendations are made on this respect.

MATTHEWS, Clyde C., Jr. "A Follow-Up Study to Determine the Effectiveness of the Coordinated Vocational Education and Training Program in Selected High Schools in Oklahoma." Doctorate of Education Dissertation, 1976, Oklahoma State University, Stillwater.

Purpose. The two primary purposes of this investigation were to determine the success of the CVET program in enabling students to obtain employment or to succeed in regular vocational programs and to determine students' and instructors' opinions of the applicability of the related curriculum and the value of the vocational program.

Method. The first part of the study concerning the effectiveness of the CVET program included 25 programs in 17 schools with data obtained on 1,739 students. The second part of the study was an analysis of the opinions of 110 completers, 79 non-completers, and 27 instructors concerning the applicability of the related English, math, science, and social studies as well as the value of the vocational course. The first part of the study was a descriptive research effort. The second part was also a descriptive research endeavor with the pooled variance t test used to test for any significant difference between completers' and non-completers' responses.

Findings. Findings revealed that 148 of the 1,739 students dropped CVET during their first year of CVET. Eight hundred thirty-one completed only one year of CVET. Two hundred thirty-nine who completed only one year of CVET were in their second year when the study was made, and 760 students completed two years of CVET. The CVET program did enable students to succeed in regular vocational programs as well as enable students to obtain jobs related to their CVET training. There was no significant difference between the mean response of the completers' and non-completers' ratings of the related English, math, science, and social studies. There was a significant difference at the .05 level in the mean response concerning the value of the vocational course. The mean response of completers, non-completers, and instructors rated math as being from "some" to "much" in applicability. All groups rated English as being "much" applicable, while science and social studies were rated as being of "some" applicability. All groups rated the vocational course of "very much" value.

MELTON, Chester Duane. "Salaries and Working Conditions of Agriculture Teachers in the United States." Master of Science Thesis, 1977, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to follow up a previous study, and make available information on salaries and working conditions of vocational agriculture teachers in the United States. These conditions were salaries, months on the job, teaching load, expenses, fringe benefits, FFA activities, state statistics and teacher requirements.

Method. The study included all of the states. A questionnaire was developed and sent to the state department in each state which directed vocational agriculture. If no response was received, the questionnaire was sent to the Agricultural Education Departments in those states. The final return was 100 percent.

Findings. There was a definite variation among many items from state to state and within some states as well. Employment time varied from nine to twelve months in 31 states, while in 19 states employment was on a 12 month basis. Salaries varied from $580 per month to $1,200 per month for a beginning teacher with a B.S. degree and from $740 to $1,700 per month for a beginning teacher with a M.S. degree.

The main changes since 1975 were months on the job, teacher qualifications and student load.

MORGAN, Vaden Winfred. "A Study of Member Participation in 4-H Club Activities in Coal County." Master of Science Report, 1976, Oklahoma State University, Stillwater.

Purpose. Scheduled events are planned annually for 4-H club members. This study was concerned with the activities of the members during the 1975-1976 school year.

Method. In order to check the amount of activity in each 4-H scheduled event, a questionnaire was given to 181 members in five clubs. The questionnaire asked for a negative or positive response to participation in 15 scheduled events.

Findings. From the 15 scheduled events checked in this study, no event had more than 40% of the members from a single club participating. Members need to be encouraged to be more active in the scheduled events. Leaders need to be of more assistance to students to raise the level of participation.

PRUITT, Albert Pat. "An Assessment of Selected Areas of Instruction Related to the Farm Power and Machinery Pre-Employment Laboratory Training Program in Texas." Doctorate of Education Dissertation, 1977, Oklahoma State University, Stillwater.

Purpose. The major purpose of this study was to obtain from teachers of the Farm Power and Machinery Pre-Employment Laboratory Training Program and the university instructors of the program, perceptions of the importance and time spent on selected areas of instruction. These selected areas were: the tractor electrical system, the diesel fuel system, power trains and hydraulics.

Method. A questionnaire was mailed to each of the 93 teachers and six university instructors teaching in Texas during the school year 1975-1976. A total of 85 teachers and five university instructors responded. The data received were compiled to determine the amount of their perceived importance for each area, the estimated time they spent in the classroom and shop on each topic within each area, their competence to teach each area and the amount of perceived training they had received on each area.

Findings. The teachers of the Farm Power and Machinery Pre-Employment Laboratory Training Program of Texas placed "Much" importance on the four instructional areas. The

university instructors from selected training programs placed "Much" importance on all areas but hydraulics, which they rated of "Some" importance. The teachers and university instructors perceived importance of selected topics within the four instructional areas were similar. Major differences did occur on selected topics in the power train and hydraulic areas. The time spent on selected topics within the four areas of instruction was affected by the length of time required to teach those topics adequately. The time teachers spent on selected topics reflected their perceived importance very closely. Contrary to earlier findings, the teachers perceived themselves on the average to possess "Some" level of competence to teach the selected topics. However, the "Some" level of competence indicated the teachers recognized a need for further improvement. There was an indication that many of the teachers and some of the university instructors had received "No" training on selected topics in the four instructional areas.

REECE, Disney Harold. "Factors Influencing Vocational Agriculture Teachers to Leave the Vocational Agriculture Teaching Profession in Oklahoma Between the Years 1970-1976." Master of Science Thesis, 1976, Oklahoma State University, Stillwater.

Purpose. Focusing upon data supplied by former vocational agriculture instructors in Oklahoma, an attempt was made to determine if a trend or trends were developing which influenced vocational agriculture instructors in Oklahoma to leave the profession between 1970-1976.

Method. The prominent factors were assembled from responses obtained concerning an instrument that listed factors influencing vocational agriculture instructors in Oklahoma to leave the vocational agriculture teaching profession. The instrument was administered by mail to former vocational agriculture teachers in Oklahoma. Data collected represented 79 of the 100 former vocational agriculture instructors, representing 79 percent of the population.

Findings. The study revealed that "salary too low for responsibilities" was the major factor influencing teachers to leave the profession. Means and percentages were applied to responses for all categories. Data collected from the former vocational agriculture instructors allowed the following conclusions to be made with a degree of confidence: (1) teachers felt the salary was too low for the responsibilities incurred on the job; (2) promotions in other agricultural areas more promising; (3) $100 per year for teaching experience unsatisfactory; (4) current inflation level exceeded pay raises; (5) insufficient free time for family; (6) opportunities for promotion limited in school; (7) retirement plan was inadequate and; (8) the desire for more independence influenced their decision to leave the teaching profession.

ROBINSON, Ronald C. "Analysis of Selected Information Having Potential Use for Recruitment of Prospective Vocational Agriculture Teachers in Oklahoma." Master of Science Thesis, 1977, Oklahoma State University, Stillwater.

Purpose. Focusing upon data supplied by College of Agriculture, Agricultural Education students, and Agricultural Education files, an attempt was made to collect information for use in development of an effective program of recruitment for vocational agriculture teachers.

Method. To accomplish this, past trends in the supply of teachers were examined by checking the files of the College of Agriculture for the eight year period 1967-1975 to determine the number and percentage of students graduating in Agricultural Education and

their hometowns. This study also sought to identify and compare individuals, items and situations perceived to be influential by Agricultural Education students with regard to their decisions to qualify to teach vocational agriculture. These respondents consisted of 131 students enrolled in Agricultural Education. Respondents indicated on a five-point rating scale the degree of influence 42 selected items exerted on their decisions to teach vocational agriculture.

Findings. The study revealed that during the period of the study the number of Agricultural Education graduates was fairly stable, except there was a decrease in 1974-1975. In terms of influence, analysis indicated that the local vocational agriculture teacher and parents ranked highest, while the extension youth agent and the high school counselor were found to have little influence on the students' decision to qualify to teach. The job characteristics found most appealing were "the opportunity to work with youth," "the opportunity to continue work with livestock," and "the self-satisfaction of helping to educate students." The lowest ranking items were "the opportunity to move into full-time farming" and "anticipated salary." Sources of final confirmation found most influential were "individual's own experience in FFA," "observation at events," and individual's own experience in Vo-Ag." Analysis revealed that Agricultural Education students that qualified to teach came from all geographic areas of Oklahoma with eight students being the most from one location during the eight year span.

SMITH, Edward Arthur. "A Comparison of Attitudes of Student Teachers Toward Vocational Agriculture Basic Core Curriculum Before and After Student Teaching." Master of Science Thesis, 1977, Oklahoma State University, Stillwater.

Purpose. The major purpose of this study was to compare the attitude of student teachers before and after student teaching toward the Basic Core Curriculum and usefulness of its components.

Method. Data were collected by administering a questionnaire before student teaching and then again after student teaching to 51 student teachers of the fall and spring semesters of the 1976-1977 school year.

Findings. It was found that student teachers were in general agreement that the Basic Core was an adequate teaching device and there were several minor yet negative changes in mean responses. However, there remained an "agree" attitude after student teaching as compared to before regarding the Core Curriculum.

STARR, John Lloyd, Jr. "The Development of Indicies for the Use of GATB Scores in Predicting Student Success in Eleven Oklahoma Area Vocational-Technical School Programs." Doctorate of Education Dissertation, 1976, Oklahoma State University, Stillwater.

Purpose. In this study, an effort was made to determine the interrelationships between student achievement in the shop or lab portion of his vocational classes and his instructor's perception of the student's potential for success in the occupation for which he is being trained.

Method. The relationships between the criteria of (1) academic achievement, (2) skill achievement, and (3) perceived potential success were then analyzed using multiple linear regression with GATB scores as independent variables in order to determine which GATB scores contributed to the student's achievement. After establishing the criteria relationship and GATB factors relative to their achievement, expectancy indicies were based on the

actual rankings of students by their instructors and the students' GATB score profiles. The expectancy indicies illustrate the percent of the students ranking above the mean on the three criteria for each vocational program within a set range of GATB scores.

The subjects included in the study were enrolled in twenty-two Area Vocational and Technical School sites across the state of Oklahoma. There were 125 different classes representing the eleven vocational programs included in the study with approximately 1500 students enrolled in them who participated in the study.

Findings. There is a high positive correlation between how a student achieves in the vocational classroom, how he achieves in the shop or lab, and how an instructor perceives the student will achieve in the occupation in which he is being trained. It was determined that different GATB factors contributed to student achievement of each of the three success criteria for each different program. GATB scores were statistically significant predictors of the criteria but their relationships to them were low in magnitude due to the data for both GATB factors and student rankings being ordinal in nature.

WOOD, Robert Leleford, Jr. "Perceived Importance and Level of Skill in Selected Animal Science Competencies by Selected Vocational Agriculture Teachers in Northeast Oklahoma." Master of Science Report, 1977, Oklahoma State University, Stillwater.

Purpose. The objective of this study was to determine the competencies perceived needed by teachers of vocational agriculture teaching animal science and to determine the degree which these competencies were possessed by the teachers.

Method. Thirty-four competencies were evaluated by the 49 teachers in the study and rated on a five-point rating system based on their importance and the teacher's perceived ability to perform the skills. The 34 competencies were grouped into general, veterinary-like, nutritional, animal reproduction, and fitting and grooming competencies.

Findings. The agricultural instructors indicated that disease identification was the most important single competency and that, as a group, they placed more importance on veterinary-like, nutritional, and fitting and grooming competencies. They rated 91 percent of the competencies as of considerable importance or greater.

The results also show that teachers need to improve their skill in performing many of the competencies, mainly the general competencies, disease identification, and developing rations. They also indicated that additional training in fitting and grooming animals for livestock shows was needed.

## OREGON

ALDEN, Williams. "A Survey of Oregon School Administrators: Positive Attributes of the Future Farmers of America Program." Thesis MEd, 1976. Oregon State University, Corvallis.

Purpose. It was the intent of this research to determine the feelings of the public school principals and superintendents of Oregon about the Future Farmers of American program in their vocational agriculture departments. Responses given on a mailed survey were the means of collecting this information. It is hoped that information gleaned from this research may be helpful to the vocational agriculture departments in the state of Oregon.

Method. This survey was conducted over the 1975-76 school year in the state of Oregon. The questionnaire, which was mailed, was constructed in the form of statements to which the respondent could indicate agreement, disagreement, or no option. A statistical analysis was completed on the responses given on returned questionnaires.

Findings. The significant findings of this study were as follows: A majority of administrators felt that the FFA Program:

1. contributes to school and community.
2. helps develop students' abilities in leadership, responsibility, group cooperation and agricultural skills.
3. is meeting its goals.
4. has justifiable expenses.
5. has acceptable extra costs because of instructor time spent on FFA.
6. involves beneficial competition which is not excessive.
7. requires a large time involvement but that time is well spent.

The survey showed that the FFA Program has a strong approval among Oregon administrators, and these administrators showed a good working knowledge of their FFA programs and Vo-Ag departments. Comments were solicited in completion of the survey. The most frequent mentioned point, was that it is difficult to obtain "good" Vo-Ag instructors.

SCHOENBORN, Roger E. "Forestry Competencies Needed by High School Graduates as Rates by Employers, Secondary and Post-Secondary Instructors." Master of Science in Agricultural Education, 1976, Oregon State University, Corvallis.

Purpose. The purpose of this study was to identify and give priority to the forestry competencies most commonly needed by high school graduates in Oregon.

Method. A survey instrument which identified 170 forestry competencies was mailed to 30 forestry employers, 29 secondary forest products instructors, 23 community college forestry instructors in Oregon, 18 secondary agriculture forestry instructors and 13 community college forestry instructors from Washington. Respondents expressed their opinion on each competency by checking whether it was "essential," "necessary," "nice to know," or "not necessary" for a graduate from a high school forestry program. These data were reported in mean scores and rank orders on each of the 170 competencies and 26 units of instruction.

Findings. The major findings of this study indicated:

1. that forestry competencies needed by high school graduates can be identified and ranked.
2. there is a need for the forestry competencies rates "essential" and "necessary" to be taught in high school forestry programs.
3. forestry competencies rated "nice to know" are not vital in a forestry program, but could be included if instructional time is available.
4. forestry competencies rated "not necessary" should not be taught in high school forestry programs.
5. that priority needs to be given to competencies with highest rank order, when instructional time in forestry is limited.
6. that the importance of the forestry units of instruction be considered and the units be taught with the same emphasis as the rank order received.
7. forestry employers rate competencies needed by high school graduates closer to the total mean score than the other groups surveyed.

## PENNSYLVANIA

ANDERSON, Robert J. Factors Affecting the Adoption of Soil and Water Conservation Practices by Farmers. Paper, M.Ed., 1976. 32 p. Department of Agricultural Education, The Pennsylvania State University, University Park.

Purpose. (1) To develop a teaching unit plan on soil and water conservation to be used in such a way that a young or adult farmer will be stimulated to obtain and implement a Conservation Farm Plan that will meet the criteria of the Pennsylvania Clean Stream Law, take an active part in locating erosion potentials on his farm, and discover alternative methods of preventing excessive soil losses, (2) to develop the course in a way that will instill in the farmer the importance of soil conservation, and (3) to compare attitudes held by students before and after studying the unit on soil and water conservation.

Method. The hypothesis tested was that there are no significant differences between attitudes of farmers before and after studying a unit on soil and water conservation as measured by an attitude test. The unit of instruction was developed through consultation with specialists in the field and review of technical publications. It included a plan for the teacher, resource information, and work sheets for the students.

The unit was divided into five problem areas: (1) soil erosion; (2) predicting erosion potential; (3) alternatives to minimizing erosion; (4) selecting alternatives to meet objectives; and (5) formalizing a Conservation Plan. Each problem area provided class discussion and practical problems for individual student study. The technical content was screened by soil conservationists. Students agreed or disagreed with eleven attitude statements that had been validated by local conservationists. The end of the scale where the conservationists tended to answer was assigned a value of 5; the opposite end was given a value of 1.

The persons tested were farmers in the Eastern Lancaster County School District interested in obtaining a Conservation Farm Plan. Group No. 1 consisted of 5 members of the Grassland Young Farmer Association. Group No. 2 consisted of 7 farmers who attend meetings in the Hinkletown Adult Farmer Program. Group 1 students, taught by the YFA instructor, were pre-enrolled by personal contact. Two meetings were held of 1 1/2 hours in length. Group 2 was taught by the Adult Farmer instructor. The farmers were not pre-enrolled but a public meeting was publicized in local newspapers. One meeting of 1 1/2 hours was held.

Findings. Group No. 1 made responses of between 3.2, which was toward the positive side of the scale, and 4.8, which was a definite positive score. Group No. 2 gave pre-instructional test responses of between 3.0, which was neutral, and 4.0, which was a positive score. Averages for the pre- and post-instructional tests were calculated. Group No. 1 went from 42.0 to 42.2, while Group No. 2 went from 36.3 to 38.0.

It is possible to measure changes in attitudes without assurance that needed conservation practices will be applied to the land. A study over several years should compare farmers who attend classes with others who develop a plan in the conventional manner to determine the amount of conservation applied to the land under both systems of learning. A revised attitude measurement test might help conservation planners and teachers to separate farmers who need more class instruction or more individual assistance.

GRAYBILL, Jr., James C. An Evaluation of Wildlife Educational Aids and Wildlife Conservation Courses Taught in Pennsylvania Agriculture Departments. Paper, M. Ed., 1976. 38 p. Department of Agricultural Education, The Pennsylvania State University, University Park.

Purpose. The overall purpose of the study was to improve the quality of wildlife conservation taught in agriculture departments in Pennsylvania high schools. The specific objectives were. (1) to evaluate the Pennsylvania Game Commission's Wildlife Educational Aids, to determine their effectiveness in teaching wildlife conservation to agriculture students, and to determine how the Wildlife Educational Aids can be improved, (2) to determine if there is any relationship between cognitive achievement scores and student involvement in the wildlife conservation record book program, and to determine how the wildlife conservation record book can be improved.

Method. Twelve Pennsylvania schools in which wildlife conservation was taught as part of the vocational agriculture curriculum participated in the study. Nine schools were selected to be treatment groups and three schools were selected to be control groups. The teachers in the nine treatment schools used the Wildlife Educational Aids as a teaching reference. Whereas, the teachers in the control group did not use the Wildlife Educational Aids. Sampling procedures were employed to control for other differences. Pre-tests and tests were the same for both groups. The students involved in the study were classified into three categories. Treatment 1 was comprised of students in the treatment group who did not have a wildlife conservation project as a supervised project. Treatment 2 was comprised of students having a wildlife conservation project as a supervised project. The control group was comprised of students taught the wildlife conservation unit without the benefit of the Wildlife Educational Aids. Analysis measures used to analyze pre-test and test scores were. (1) Pearson Product Moment Correlation test, (2) correlated t-test, and (3) analysis of covariance.

Findings. Students taught a unit in wildlife conservation with the benefit of the Wildlife Educational Aids scored significantly higher than students taught a unit wildlife conservation without the benefit of the Wildlife Education Aids. No significant difference in achievement was noted between students with a wildlife conservation project and students without a wildlife conservation project.

GREEN, James L. An Evaluation of Adult On-Farm and Classroom Instruction in Soil Conservation. Paper, M.Ed., 1976. 43 p. Department of Agricultural Education, The Pennsylvania State University, University Park.

Purpose. This study evaluated the effectiveness of adult on-farm and classroom instruction for teaching the use of soil conservation practices. The study also provided information on the relation of establishment of conservation practices to having a higher level of knowledge of conservation practices, having a conservation plan, length of time with a conservation plan, and type of farm. The length of time with a conservation farm plan was compared with number of practices established and knowledge of conservation practices.

Method. A random sampling of farmers in the Elizabethtown School District, stratified as cooperators or noncooperators, was made. These people were divided into four groups and given treatments of on-farm or classroom instruction. A total of 37 farmers participated in the study. One group of cooperators and a group of noncooperators attended two three hour classes on soil conservation practices. A group of cooperators and a group of noncooperators were visited twice on-farm by the agriculture teacher and soil conservation practices were systematically discussed. All the farmers in the study were visited on their farms and establishment of soil conservation practices was surveyed. All the farmers were tested before and after instruction. The data were collected and analyzed.

Findings. Both on-farm and classroom instruction was found to be effective in teaching the use of soil conservation practices, but on-farm instruction was found to be the more effective of the two methods. Farmers were conservation plans did not have a significantly higher level of knowledge of conservation practices and did not establish a

significantly greater number of conservation practices. Farmers with a higher level of knowledge of conservation practices at the beginning of the study were not found to have established a significantly greater number of practices. Farmers that had conservation plans longer were not found to have a higher level of knowledge or to have established more practices. Dairy farmers were not found to have established a larger number of practices than non-dairy farmers.

HAWK, Marvin G. Pedagogical Competency Needs of Beginning Teachers of Agriculture in Pennsylvania. Thesis, M.Ed., 1977.

Purpose. The primary purpose of this study was to identify and validate competencies needed by vocational agriculture teachers in Pennsylvania. This study provided information needed to redirect the undergraduate program in Agricultural Education at The Pennsylvania State University into a performance and competency based program. The specific objectives of the study were:

1. To identify pedagogical competencies necessary for beginning teachers of agriculture in Pennsylvania.
2. To compare responses of three groups of vocational agriculture teachers as they perceive compencies needed for entry level employment as teachers of agriculture.
3. To compare responses of three groups of teachers on their perceived competency level as beginning teachers of agriculture.

Methods. A survey instrument consisting of 182 competency statements in six categories was developed for the study. The categories were: (1) Program planning, development, and evaluation, (2) Planning of instruction, (3) Execution of instruction, (4) Evaluation of instruction, (5) Student vocational organizations, and (6) Supervised occupational experience. Three groups of agriculture teachers rated their competency level at teaching entry and the necessary competency level for beginning teachers of agriculture. The three groups surveyed were: (1) Inexperienced teachers, (2) Intern teachers, and (3) Cooperating teachers. Analysis of variance was used to test the data. Where significant differences were found among a series of means, a least significant difference procedure was used to determine which differences among respondents were significant.

Findings. The principle findings of this study were:

1. The three groups of teachers viewed the competency level needed for beginning teachers of agriculture primarily the same. This was supported by only 10 of 182 competency statements rated significantly different by the three groups of teachers.
2. The three groups of teachers did not perceive their entry level competence as equal at teaching entry. This was supported by 55 of 182 competency statements rated significantly different. In the majority of these competency statements the Intern Group rated their competence significantly different at entry level.
3. The three groups of teachers felt that a least average competence was necessary for the majority of those competency statements included in the survey. One hundred twenty-eight were rated 3.0 or higher.

SELL, Robert K. and SELL, H. Richard. Development of a System to Identify Disorders of Ornamental Trees and Shrubs Common to Pennsylvania. Paper, M.Ed., 1976. 41 p. Library, The Pennsylvania State University, University Park.

Purpose. (1) To develop a key system to identify disorders of ornamental trees and shurbs based upon the use of observable symptoms, and (2) to assemble information on the disorders in a simple descriptive form usable as a learning aid by horticulture students, as a reference by teachers and county agricultural agents, and as a reference for garden store personnel.

Method. A tentative list of disorders was developed by consulting with knowledgeable persons throughout the state, and by referring to textbooks and other publications. Since this list was very extensive, specialists were consulted to revise the list by eliminating disorders felt to be very minor in Pennsylvania. A reasonable and workable final list of disorders was made.

Several possibilities were explored in selecting a sorting and identification system. Finally, a notched edge card sorting file, known as Keysort, was selected. This patented system gives a different and interesting approach to the identification of plant disorders. It is an efficient means of cataloging and retrieving information. Holes in the edges of cards are given meaning through a numbering system. Notches are cut at particular locations, so that when the cards are sorted by inserting a knitting needle type device through an item identified hole, cards pertaining to that subject will fall out of the deck, giving the possible solution to the problem.

After numerous trials and two meetings with suppliers of the cards, a system was devised whereby a numbered hole represents a particular symptom of a disorder. Holes are also numbered to represent species so that cross referencing can be done, and to make it possible to retrieve any particular disorder card from the deck. A manual was developed to accompany the card file, giving directions for use and containing the outline of symptoms with their sorting numbers.

A group of 13 teachers of agriculture was used to evaluate by questionnaire the usefulness of the system as the project neared completion. The key system was also tested by comparison with lists of twenty disorders and their common symptoms obtained from several county agricultural agents and teachers of agriculture.

Findings. The authors offer the following recommendations for further development of this identification key:

1. The cards with their symptoms and species should be closely examined by experts to be certain all common symptoms and species are included.
2. Pictures and illustrations necessary to make a positive identification of a disorder need to by added to the cards.
3. The key needs to be tested with various groups to determine who can successfully use it. Among these are cooperative extension personnel, industry fieldmen, farmers, high school students, and homeowners.
4. The possibility of adapting this key to a computer should be explored.
5. The cost of production of the system and market demand for it should be determined.

SOLLENBERGER, Wayne A. Revision of the Land Use and Management Scorecard. Paper, M.Ed., 1976. 68 p. Library, The Pennsylvania State University, University Park.

Purpose. To determine what subparts of the land use and management scorecard predicts students' total scores. The results of the study were used to revise the scorecard and handbook to increase the students' comprehension of land judging and its benefits.

Method. Information for this study was obtained by personal interviews with soil scientists, agronomy extension specialists, and vocational agriculture teachers, who have used the scorecard to teach land judging. Additionally, data were analyzed from the sub-scores of the 1975 and 1976 State FFA Land Judging contests. Multiple regression was used to analyze the data. Revisions made on the new scorecard were based on the interviews and the regression analysis.

Findings. Revisions made to the scorecard as the result of this study were: (1) deleted student's personal information to provide more writing space, (2) provided space for the judges to record student's total score for a specific site, (3) coordinated the scorecard with

the Soil Survey Booklet printed by the Soil Conservation Service, (4) rearranged the items in Part I of the scorecard to permit students to follow a regular routine when judging a site, (5) rearranged Part II, to permit students to determine the limiting factors of a site before selecting the land capability class, (6) redefined the terms in Part III to help increase the students' comprehension of land use recommendations, (7) additional conservation practices were included to update the scorecard with modern farming methods, (8) seldom used conservation practices were eliminated from Part IV, (9) road building was eliminated from Part V, since its soil requirements were similiar to that of home building.

The special use "lagoon building" replaces pond building, since many livestock owners use lagoons to store animal wastes.

Regression analysis showed that "Land Use Recommendations" on Part III of the scorecard was the item which best predicted the students' total score and that item I "Slope" in Part I was the least reliable predictor.

A revised handbook to accompany the scorecard was included in the paper.

## TEXAS

HERRING, Don R. "Identification and Validation of Competencies for Teacher Education-Agriculture." Staff Study, 1976, Texas A&M University, College Station.

Purpose. The purpose of this study was to identify and validate competencies required for entry into the professional role of the teacher of vocational agriculture and to initiate procedures for incorporating the validated competencies into teacher education programs of the nine universities providing certification programs for vocational agriculture in Texas.

Method. An advisory committee was used to plan strategies for two working conferences of teacher educators in Agricultural Education in Texas and to suggest references and consultants. The purpose of the first working conference was to identify essential competencies and to develop the format for an instrument which would be the basis for a validation study. The validation of the competencies was accomplished by a mailed survey instrument to all vocational agriculture teachers in Texas serving as supervising teachers and to teacher educators and state staff personnel in Texas. The data from the survey became the basic documentation for decision making at the second working conference, where procedures were initiated for incorporating the validated competencies into the teacher education programs of the nine universities.

Findings. Of the 135 competencies, 115 received a rating of 3.00 or higher on a four-point scale from all three groups of respondents. Generally, teacher educators tended to rate the competencies higher than did supervising teachers and state staff personnel. Competencies were placed into three priority areas based on the ratings they received, and were placed into categories based on a consensus of opinion as to the most appropriate level of experience for each competency to be developed in teachers-whether at the pre-service or the in-service level. Fifty-three competencies were identified as being critical at the pre-service level.

WEBB, Earl S. and STONER, Thomas M. "A Followup Study of Agricultural Education Graduates 1965 through 1971. Texas A&M University." Staff Study, 1977, Texas A&M University, College Station.

Purpose. The purposes of this study were (1) to determine the principal persons and factors that influenced graduates to select Texas A&M University and major in Agricultural Education, (2) to obtain information to help improve curricular offerings for career preparation, and (3) to determine career patterns of graduates both in and out of the field of education.

Method. A questionnaire was sent to approximately 280 graduates of the department of Agricultural Education. The four-part instrument had one section to be answered by all respondents and separate sections to be answered by graduates who had: (1) entered the vocational agriculture teaching field, (2) left teaching, and (3) never taught. Means and frequency distributions were obtained by computer analysis and used to make determinations.

Findings. The most influential persons in the choice of major and university were the vocational agriculture teacher and parents, respectively. The most influential factors were desire for a broad knowledge of scientific agriculture, good agricultural facilities, and high academic standards. Most respondents came from agricultural backgrounds and had been heavily involved in FFA and/or 4H. A majority of those graduates who continued in the teaching field came from non-agricultural backgrounds and had transferred to Texas A&M from a junior or senior college. Most non-teaching graduates remained associated with agriculture in some form. Most did not enter teaching because they found a more interesting profession. One half of the respondents who entered teaching left the profession after an average of 4+ years. The non teaching respondents were making about $5000 more per year than continuing teachers.

WEBB, Earl S. and STONER, Thomas M. "A Study to Determine the Extent of Problems Experienced by First Year Vocational Agriculture Teachers." Staff Study, 1977, Texas A&M University, College Station.

Purpose. The purpose of this study was to determine the problem areas encountered by all first year vocational agriculture teachers in the state of Texas so that the results might be used for pre and in-service training and for potential modification of curricula.

Method. All of the first-year vocational agriculture teachers in the state of Texas were sent a questionnaire listing potential problem areas. The teachers were asked to rate the problem areas on a 1 - 5 scale (none-to-great problem) plus "not applicable."

Findings. In general, the problems of the first year teachers were not perceived to be overwhelming; less than 5 percent of the problem areas were classified as "significant" problems and less than 2 percent as "great." The problem areas ranked highest were those associated with teaching record books, obtaining supplies and equipment and working with young farmers and adult groups. Preparation for teaching would appear to be generally adequate. Discipline was not a major problem. Responses from Texas A&M graduates did not differ significantly from graduates of other teacher-training institutions.

WHITE, Inman. "Assessment of Texas FFA Contests as Perceived by Secondary School Principals, Parents, Current FFA Members, and Teachers of Vocational Agriculture." Doctor of Philosophy Dissertation, 1977, Texas A&M University, College Station.

Purpose. The purpose of this study was to assess the FFA contest activities in Texas as perceived by secondary school principals, parents, current FFA members, and teachers of vocational agriculture. Three supporting objectives were established.

Method. Data were received from 144 school district sets consisting of opinionnaires from the secondary school principal, parent, current third year FFA member, and a teacher of vocational agriculture from the same school district. Analysis of variance, descriptive statistics, and correlation analyses were used to test hypotheses. Statistically significant differences among the four groups were encountered.

Findings. Major findings: Significantly different means were found among responses of secondary school principals, parents, current FFA members, and teachers of vocational agriculture regarding seven statements pertaining to the value of FFA contests. The secondary principals levels of agreement or disagreement were more extreme than the other three groups in about 72 percent of the cases. For 16 of the 60 value statements no significant difference was found among responding groups.

Eight percent was the highest level of any responding group indicating deletion of specific FFA contests; 85 percent were against deletion of any contests; 25 percent of the teachers of vocational agriculture and 22 percent of the current FFA members listed additional contests, while only 12 percent of the parents and 8 percent of the principals did so. A total of 77 of the 576 respondents (13 percent) suggested additional contests. The two most frequently mentioned of 30 recommendations given for improving the FFA contest program in Texas were: (1) More competent judges in all contests and (2) Material used in FFA contests should be designed for regular classroom instruction.

## VIRGINIA

FIELDS, James B. "A Study of the Conditions and Situations of the Program of Agriculture in Prince George County as Viewed by Agricultural and Non-Agricultural Enrollees." Master of Science Thesis, 1977, Virginia State College, Petersburg.

Purpose. The purpose of this study was to ascertain the opinions of a group of students in the junior high and senior high schools concerning their attitudes toward agriculture in Prince George County.

Method. A questionnaire was developed which provided the questions, which, when answered, would provide the information necessary to determine the views of students toward certain aspects of agricultural education and agriculture in Prince George County. Since it was impossible for the writer to personally administer the questionnaire to each of the students, he solicited the help of the other three agricultural instructors in this endeavor. The questionnaire was completed by one-hundred percent of the students and the writer concluded that the views expressed were representative of students with similar experiences and ages.

Findings. This study revealed that fourteen years of age was the most common age of students enrolling in both agricultural education and general mechanics classes, with the next most common age being thirteen. Less than twenty percent of respondents were farm-reared and slightly over fifty percent were a combination of farm-reared and rural. The study revealed part-time farmers outnumbered full-time farmers by more than two to one and that the status of agriculture in Prince George County was average or better. It was further found that ninety respondents had at least fair attitudes toward farming as a career occupation, while the attitudes of fifty-nine individuals were poor. In terms of courses to be offered eighty-three students felt an option in Agricultural Machinery Services should be offered. Ornamental Horticulture was favored by forty-eight and Natural Resources Management by thirty-eight. One-hundred and eighty-four respondents felt the leadership phase of the FFA was important in developing rural leaders.

FIELDS, Marvin A. "A Study of the Nonagricultural Education Major and Teaching." Staff Study, 1977, Virginia State College, Petersburg.

Purpose. To determine the character of pre-service training and the relative ability of each individual to perform the assigned duties. To this end, efforts were made to ascertain the problems encountered and factors pertaining thereto.

Method. The list of employed teachers was secured from the office of the State Supervisor and a questionnaire was developed and sent to each teacher. Data were secured on character of training, employment difficulties, instructional procedures, quality of enrollees, and budgetary influences.

Findings. The average numbers of semester hours completed were as follows: Agricultural Education, 8.86; other professional courses, 16.44; Technical Agriculture, 28.80; Agricultural Mechanics, 13.06; and Life Sciences, 26.40. The respondents were best prepared to teach Agricultural Science & Mechanics I and II, and Agricultural Production III, but least prepared to provide instruction in Ornamental Horticulture and Adult Education. In terms of relative amounts of influence, problems were encountered in maintaining the students' interest, relating classroom theory to actual job practices, and securing resource materials. From the point of view of improvement provisions and procedures, the respondents listed preparation and distribution of standard lesson plans inter-teacher visitations and improved pre-school workshops as foremost needs.

OFFURUM, Bernard C. O. "Anticipated Contributions of Agricultural Education to Operation Feed the Nation in Imo State of Nigeria." Master of Science Thesis, 1977, Virginia State College, Petersburg.

Purpose. The purpose of this study was to determine whether agricultural education made the anticipated contributions to the success of "Operation Feed the Nation" in Imo State of Nigeria.

Method. A study was made of the literature which related to the success of "Operation Feed the Nation," and the status of the production of food commodities as this effort related to certain dietary needs. Attention was also given to the complex land tenure system and the progress which was being made in the over-all agricultural situation. Pertinent data were sought out in an effort to develop a list of improvement recommendations.

Findings. In 1975, production of all food commodities rose by approximately 2.5 percent, barely sufficient to keep up with the increase in population and the calorie intake per caput per day was 2,025 and crude protein per caput per day was 56.45 grams; in 1969, the production of maize, rice and cowpea fell short of the requirements in the State and in 1976, in spite of the increase in their production, values indicate how far the production of maize, rice, and cowpea, fell short of requirements and estimated demands; in 1969, the model farm size was between one acre and 2.5 acres while in 1970, the model farm size was under 0.25 acres; in 1976, there was even further accelerated pace of farm land fragmentation.

PETTY, Van H. "A Study to Determine if Selected Agricultural Mechanics Laboratories are Meeting Certain Recommended Safety Requirements." Master of Science Thesis, 1977, Virginia State College.

Purpose. To determine if selected agricultural mechanics laboratories are meeting certain recommended safety requirements.

Method. The writer made an extensive study of the literature pertaining to the problem which was being investigated. A tentative data collecting instrument was developed and administered to two of the departments of agricultural education for the purposes of checking for clarity and appropriateness. Approval for administering the questionnaire during the winter teachers' conference was secured from the area supervisor of agricultural education. The writer advised the respondents and rendered his assistance upon request.

Findings. Approximately two-thirds of the respondents indicated floor space of more than 1800 square feet and all departments had a tool and supply room but eighteen departments had no locker and wash-up area; recently built agricultural mechanics labora tories planned for patio work areas; a majority of the respondents indicated that their agricultural mechanics laboratories was color coded according to the state plan. In addition, one-half of the respondents indicated that they required pupil insurance for students engaged in agricultural mechanics laboratory classes and an even greater number of respondents required safety tests before students began laboratory exercises. A majority of respondents indicated that they had proper control switches and valves on equipment in their agricultural mechanics laboratory while sixteen respondents reported that they had immediate access to and there were eleven reports of the respondents being able to adminis-ter first aid.

ROBINSON, Yvette G. "Factors Involved in Effective Teaching of Recreational Activities to 4-H Club Members." Master of Science Thesis, 1977, Virginia State College, Petersburg.

Purpose. To determine those factors which have been involved in effective teaching of recreational activities.

Method. The evaluative survey approach and the observation approach were employed in the effort to ascertain the information which was necessary to complete this investiga-tion. The evaluative survey consisted of basic questions concerning the 4-H'ers family backgrounds, activities in their 4-H'ers experiences, participation in recreation and games, and feelings concerning lessons taught.

Findings. The major findings of the study were as follows: the ages of the rural community club members ranged from fifteen years to eighteen years; the average ages of the members in the rural community clubs exceeded the average ages of the members in the urban school clubs by four years; membership, on an average, in terms of years in the clubs, was found to be three years greater for the respondents in the rural community clubs; rather limited adult participation in recreational activities was reported; fifty-eight of the recreational leaders preferred the roles of on-lookers rather than that of participants; sixty-three of the respondents preferred that the physical activities be scheduled during the morning; the major lessons taught from recreational activities were indicated to be fun (sixty-seven) and fair play (sixty-six); and there were sixty-four favorable reactions to the effect of winning, while, on the other hand, there were forty-nine reactions of either bad or indifferent from the losers.

STURT, Samuel G. "A Study of Certain Educational Needs of a Group of Beef Cow-Calf Producers in Five Counties of the Southeastern District of Virginia." Master of Science Thesis, 1977, Virginia State College, Petersburg.

Purpose. The problem in this investigation was to study the existing management production practices which were being carried out by beef cow-calf producers, in order to secure data for educational program development, and to develop a list of recommendations for possible use by professional agricultural workers in their adult educational programs.

Method. The study was conducted by personal interviews of beef cow-calf producers. The producers are located in five counties of the Southeast District of Virginia. A total of forty beef cow-calf producers were contacted and participated in the study. The data were collected for 1975 and compiled from the interviews.

Findings. An examination of the findings reveals the following: the majority of the beef cow-calf producers interviewed were full-time farmers and had in excess of sixteen years of experience in beef cow-calf production; slightly more than one-half of the respondents were forty-six years of age or older and had at least a high school education; the average number of beef cows per respondent was 36.20, with the average number of bulls 1.37 per respondent; investment in beef cows was fairly evenly distributed among respondents, with approximately one-half of respondents having between $3,001 and $9,000 invested in beef cows; slightly more than one-half of the respondents did not have any type of parasite control program for their operations; seventy-five percent of respondents did not keep any type of records to provide essential information for use in culling, selecting replacements, and controlling breeding; and the respondents revealed that marketing was their major problem.

## WEST VIRGINIA

FERTIG, Gregory L. "Employment and Education Experiences of Former Mineral County Vocational Technical Center Agriculture Students." Master of Science Thesis, 1976, West Virginia University, Morgantown.

Purpose. The purposes of the study were to ascertain usefulness of knowledge and skills acquired and employability of students who had completed agricultural programs in order to make recommendations for improvement of curricula.

Method. A mail questionnaire sent to 194 former vocational agriculture students was used to collect the information. Post-high school occupational and educational experience data and perceptions of agricultural training utility were requested.

Findings. Students were employable upon completion of training in agricultural science, agricultural mechanics, or forestry. Nearly half the graduates had attended college or other advanced schooling since high school graduation. Competencies acquired in vocational agriculture and FFA are used on the job and to a greater extent in personal lives of former students.

GOFF, Beverly Dianne. "Student Interest and Employment Opportunities in Off-Farm Agriculture, Wood County, West Virginia, 1976." M.S. Thesis, 1977, West Virginia University, Morgantown.

Purpose. The purpose of this study was to determine if there is a need for vocational and technical agriculture and agribusiness programs in the secondary schools of Wood County.

Method. The survey method was used. The "Career Interest Inventory" developed by Hollie B. Thomas was used to ascertain interests and attitudes of 488 ninth grade students in three schools selected. A business survey form and personal interviews were used to determine the numbers and classifications of agriculturally related businesses and the number of employees requiring agricultural competencies. Business managers were interviewed after compiling a list of businesses using telephone directories, county cooperative

extension personnel, chamber of commerce and county director of vocational education. Business owners and managers were asked if they knew of any other businesses in their particular agricultural area that were not included in the list. A total of 209 businesses were contacted.

Findings.

1. Twenty to 37 percent of students expressed interest in areas of agricultural business management, agricultural resources, structures and conveniences, forestry, plant science, animal science, and power and machinery.

2. Females expressed greater interest than males in ornamental horticulture. Other areas of high female interest were agricultural resources and agricultural business management.

3. Student interest in occupational areas of agriculture was high regardless of school attended.

4. There were 1,175 full-time and 314 part-time personnel employed in occupations requiring agricultural competencies. In the private sector greatest employment opportunities existed in meat, milk and produce processing, landscaping and grounds maintenance, lumber processing and sales, and plant and flower production.

5. Most businesses and agencies were willing to permit students to visit and observe operations. More than 80 percent of employers were willing to hire students on part-time basis for competency development. Two-thirds of employers interviewed were willing to cooperate with school personnel in program planning.

6. A majority of employers in all agricultural occupational areas would have shown preference for vocationally trained employees.

GRAY, Danny Lee. "The Need for Work Experience for Vocational Agriculture Teachers of Off-Farm Agricultural Occupations in West Virginia." M.S. Thesis, 1976, West Virginia University, Morgantown.

Purpose. The purpose of this study was to determine if there is a need for a work experience program for teachers of off-farm agricultural occupations and consider some possible methods of offering learning opportunities for teachers who wish to acquire sufficient competencies to instruct students in off-farm agricultural occupations.

Method. A mail questionnaire was sent to 38 county vocational directors and 104 teachers of vocational agriculture in West Virginia. County vocational directors were asked to respond to questions dealing with the need for instructional programs in off-farm agricultural occupations, teacher competencies in those areas, and release time for teachers to acquire needed competencies. Teachers were surveyed to determine interest in and need for additional competencies in the off-farm agricultural occupations areas.

Findings. County directors of vocational education and teachers of vocational agriculture agreed that there was need for work experience programs which would improve teacher competencies in these areas. Both the teachers and county directors believed summer months would be the most desirable time to secure the work experiences. Additionally, county vocational directors thought teachers should receive their regular salary, plus college credit, during the time they are acquring additional competencies in the off-farm agricultural occupations.

KPOSOWA, Joseph F. "Dissemination and Use of Soil Testing Information Among Farmers within Selected Counties of Maryland, Pennsylvania and West Virginia. M.S. Thesis, 1977, West Virginia University, Morgantown.

Purpose. The purposes of the study were to determine how soil testing information is being disseminated among farmers within selected counties of Maryland, Pennsylvania and West Virginia and to ascertain the input of county agricultural extension agents as intermediaries between the soil testing laboratory and the farmers.

Method. The personal interview technique was used to secure the information. County extension agents in each of the three states recommended a list of 20 farmers whom they considered to be among the best farmers in their county and a total of 60 farmers was included in the survey.

Findings. Farmers in all counties consider agricultural magazines to be their most important source of soil fertility information, while county extension agents are considered to be the second most important source of information. While most farmers consider soil testing to be a valuable "tool" in their farming program, an overwhelming majority of them follow the lime recommendations more often than they follow fertilizer recommendations. Findings reveal that farmers are not receiving as much assistance and/or as many farm visits as they would like.

LAWRENCE, Layle D. and Ronald E. KING. "Student Interest and Employment Opportunities in Off-Farm Agriculture, Monongalia County, WV." Staff Study, 1976, West Virginia University, Morgantown.

Purpose. The purpose of this study was to assess expressed interest of ninth-grade students concerning agricultural occupations and to ascertain off-farm agricultural employment opportunities in Monongalia County.

Method. The "Career Interest Inventory" developed by Dr. Hollie Thomas was administered to ninth-grade students in three representative rural and urban schools to ascertain interests in agricultural occupations. Business and agency managers were interviewed to determine numbers and job titles of personnel requiring agricultural knowledge and skills in their jobs, job vacancies, anticipated turnover, and attitudes regarding cooperative efforts with vocational programs in public schools.

Findings. From 20 to 50 percent of the students surveyed expressed interest in animal science, agricultural resources, agricultural business management, forestry, structures, power and machinery, horticulture, plant science, and agricultural products. Females as well as males, and urban as well as rural students expressed interests in agricultural occupations. More than 600 persons were employed in the private sector in off-farm jobs requiring agricultural knowledge and skills. Greatest opportunities were in meat, milk, and produce processing, horticulture, and lumber processing and sales. Employers would readily cooperate in student visitation, part-time employment, and program planning.

LAWRENCE, Layle D. and Gregory L. FERTIG. "Student Interest and Employment Opportunities in Off-Farm Agriculture, Cabell County, WV." Staff Study, 1977, West Virginia University, Morgantown.

Purpose. The purpose of this study was to ascertain off-farm employment opportunities and interest of ninth-grade students toward agricultural occupations.

Method. Each business or agency manager was interviewed to determine numbers and job titles of personnel requiring agricultural competencies in their jobs, job vacancies anticipated turnover, and attitudes regarding cooperative efforts with vocational programs offered in public schools. All ninth-graders in the county completed the "Career Interest Inventory" developed by Dr. Hollie Thomas as a means of determining student interests in agricultural occupations.

Findings. Nearly 1,100 persons were employed in off-farm jobs which require agricultural knowledge and skills. Greatest employment opportunities were in meat and produce processing, horticulture, and lumber processing and sales. Employers would cooperate with schools in providing part-time employment for students and in program planning. More than 20 percent of the 1,381 students surveyed expressed interest in major areas of agriculture. Urban and rural students, both male and female, were interested in occupational areas of agriculture.

PERDUE, Roger D. "The Effectiveness of Semi-Structured Individualized Instruction in Teaching Vocational Agriculture." M.S. Thesis, 1976, West Virginia University.

Purpose. The purpose of this study was to compare the effectiveness of semi-structured individualized instruction with conventional instruction in teaching vocational agriculture.

Method. Two unit lessons were constructed on budding and grafting designed for utilization of two teaching procedures. The procedures chosen for this study were conventional and experimental semi-structured individualized instructional method. Eight teachers of vocational agriculture were divided at random into two groups of four each. One group received copies of a semi-structured individualized unit lesson, while the second group of teachers received a comprehensive source unit which they utilized in teaching by the conventional means. Second year vocational agriculture students were selected as the research population for comparing the two teaching procedures. Pre-test and post-test scores for cognitive performance and psychomotor objectives were recorded. In order to compare the effectiveness of semi-structured individualized instruction in relation to student ability and reading achievement, student scholastic aptitudes (IQ) and reading level scores were secured.

Findings. No significant difference between the two teaching methods among variables or interaction of variables was found. However, semi-structured individualized instruction is an effective means of teaching vocational agriculture. Conventional instruction was more effective than the semi-structured individualized instruction in teaching high ability (IQ) students. Reading ability was a deterimant factor for success with the semi-structured individualized method.

WALLBROWN, Rodney Mitchell. "An Evaluation of Vocational Education in Agriculture for Disadvantaged Youth in Mason County, WV." M.S. Thesis, 1977, West Virginia University, Morgantown.

Purpose. The purpose of this study was to evaluate the disadvantaged programs of vocational education in agriculture for disadvantaged youth in Mason County.

Method. Questionnaires were developed and administered to 62 students enrolled in the program during the 1975-76 school year. A second questionnaire, containing some of the same questions, was administered to students who enrolled in the program during 1976-77. Both questionnaires were designed to measure students' attitudes toward academic education,

skill development and self respect. The Wide Range Achievement test was administered to each student upon entering the program and again at the end of the year. Information obtained from these tests was used to determine the academic achievement of each student.

Findings. The program did help students to develop positive attitudes toward learning and acquisition of salable skills. Students enrolled in the program did develop more self respect, responsibility and dependability. Students abilities in mathematics and reading skills were improved. Specifically, students did acquire salable skills in the areas of horticulture, carpentry, masonry work, small engine repair, farm management, and farm machinery operation.

## WYOMING

PULSE, Ronald H., Jr., A Cost Factor Analysis For Wyoming Occupational Education Programs. Master of Science Thesis, Vocational Education, May, 1977, University of Wyoming, Laramie.

Purpose. The purpose of this study was to determine the cost expenditures for salary, equipment, instructional supplies, travel, and miscellaneous expenses to provide vocational education to secondary and post-secondary students in Wyoming.

Method. All of the state request forms for Federal funding were secured from the Wyoming State Department of Education, Office of Occupational Education, the data key-punched and computer tabulated for analysis. This study included Vocational Agriculture, Business and Office, Distributive, Health, Home Economics, Trades and Technical, and the category Other. Tables were drawn for total cost, average cost per department, average cost per instructor, cost per student, and total cost all school districts. These data were reported for each variable and service area by dollar value and percentage.

Findings. The major findings for secondary Vocational Agriculture were: (a) total cost for 25 departments in 1976-77 was $661,885, (b) average cost per department was $26,475 with salary and instructional supplies being the most expensive factors, (c) average cost for the 36 instructors included was $18,386, (d) average cost per student was $229 for salary or 77% of total, travel was $16 or 5%, equipment was $17 or 6%, instructional supplies was $28 or 9%, and other miscellaneous was $9 or 3%, and the total cost was $299. No attempt was made to draw conclusions or make comparisons between or among the service areas.

# STUDIES IN PROGRESS
# 1977-78

## ALABAMA

BAKER, Bill and IVERSON, M.J. "Competencies for the Occupation, Farrier." Staff Study, Auburn University, Auburn.

DRAKE, J.B., IVERSON, M.J., PATTERSON,G. and SCARBOROUGH, C.C. "A Five Year Follow-up of Graduates in Agricultural Education at Auburn University." Staff Study, Auburn University, Auburn.

IVERSON, M.J. "Research Priorities in Agricultural Education." Staff Study, Auburn University, Auburn.

## ARIZONA

ETLING, Arlen. "Materials Development and Evaluation in Extension Education." Staff Study, University of Arizona, Tucson.

GILROY, James J. "Cultural Beliefs, Values and Norms of Etiquette Related to Agricultual Education on Navajo Reservation." Masters Study, University of Arizona, Tucson.

HILLER, Joel. "Agency Coordination for Community Education: Future Perspectives for Non-Metropolitan Arizona." Masters Study, University of Arizona, Tucson.

JACOBS, C.O. "Model/Unit Instructional Concept for Teaching Operating Principles of Electric Motors." Staff Study, University of Arizona, Tucson.

MCCORMICK, Floyd G. "Development and Evaluation of Instructional Units for Teaching Inductively Principles of Agricultural Science." Staff Study, University of Arizona, Tucson.

WELLMAN, Paul P. "Effect of a Check Sheet on Teacher Evaluation of Student ARC Welds." Masters Study, University of Arizona, Tucson.

ZURBRICK, Phillip R. "Occupational Opportunities in Agriculture in Arizona-1978." Staff Study, University of Arizona, Tucson.

## IDAHO

KLEIN, Tom. "A Study of the Impact of Admitting Female Students to the High School Vocational Agriculture and FFA Programs in Idaho." Thesis, M.S., University of Idaho, Moscow.

ORTHEL, Glenn. "A Study to Evaluate the Agricultural Education Curriculum of the University of Idaho." Thesis, M.S., University of Idaho, Moscow.

## INDIANA

MOORE, Barbara and MOORE, Gary E. "A Multi-media Approach to Improving Communication of Vocational Education in Indiana." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

MOORE, Gary E. "A Comparison of Perceptions as to Why Vocational Agriculture Teachers in Indiana Are Leaving the Profession." Staff Study, Purdue University, West Lafayette.

MOORE, Gary E. "Effects of Selected Feedback Modes on Student Learning and Use of Faculty Time." Staff Study, Purdue University, West Lafayette.

OWINGS, Jeffery A. "Effect of Vocational Youth Club Membership and Leadership Experience on the Development of Personality Traits in High School Students." Staff Study, Purdue University, West Lafayette.

OWINGS, Jeffery A. and RICHARDSON, William B. "Performance Objectives and Criterion Referenced Measures for Agri-chemical Occupations." Staff Study, State Board of Vocational and Technical Education and Purdue University. (Project formerly under the direction of David Howell)

RICHARDSON, William B. "Development of an Employer Follow-up Model of Former Vocational Students." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

RICHARDSON, William B. "V-TECS Catalog Development in Vocational Horticulture." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

RICHARDSON, William B. and BROWN, C. Edward. "Common Content Core for Agribusiness Education Programs." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

RICHARDSON, William B. and BROWN, C. Edward. "Curriculum Development in Landscaping for Vocational Horticulture Programs." Staff Study, State Board for Vocational and Technical Education and Purdue University, West Lafayette.

RICHARDSON, William B. and BROWN, C. Edward. "Job Title Analysis for Selected Job Titles in Horticulture." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

RICHARDSON, William B. and Brown, C. Edward. "Purposive Study and Curriculum Development in Nursery Operators." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

RICHARDSON, William B., Kline, C. E. and WHITE, T.R. "Instrumentation for the Generalizable Education Model for Vocational Teacher Education." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

RICHARDSON, William B., MOORE, Gary E. and LEGACY, James L. "The 1977 Summer Apprentice Program." Staff Study, State Board of Vocational and Technical Education and Purdue University, West Lafayette.

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BRIERS, Gary E. "An Experimental Evaluation of an Instructional Packet on Supervised Occupational Experience Programs of Beginning Vocational Agriculture Students." Doctor of Philosophy Dissertation, Iowa State University, Ames.

BYLER, Bennie L. "Analysis of the Role of the Vocational Agriculture Instructor as a Community Leader in Agriculture." Staff Study, Iowa State University, Ames.

RAWLS, Willie J. "Parental Perceptions of Vocational Agriculture Supervised Occupational Experience Programs." Doctor of Philosophy Dissertation, Department of Agricultural Education, Iowa State University, Ames.

WILLIAMS, David L. "Attitudes of Former Vocational Agriculture Students Towards Selected Aspects of Their Supervised Occupational Experience Program." Staff Study, Iowa State University, Ames.

## NEW YORK

BALDWIN, Kenneth R. "Teaching Techniques for the Improvement of College Teaching." Master of Science Thesis, Cornell University, Ithaca.

BERKEY, Arthur L. and DRAKE, William E. "Competency Identification, and Materials and Program Development for Competency Based Teacher Education in Agriculture." Staff Study, Cornell University, Ithaca.

CUSHMAN, Harold R. "The Cornell Diagnostic Observation and Reporting System for Student Description of College Teaching." Staff Research, Cornell University, Ithaca.

OLAITAN, Sampson. "A Strategy for Improving the Teaching of Agricultural Sciences in High Schools in Ondo State, Nigeria." Ph.D. Thesis, Cornell University, Ithaca.

ONUOHA, Isaac C. "The Educational Needs of Subsistence Farmers in Imo State, Nigeria." Ph.D. Thesis, Cornell University, Ithaca.

SALINAS, Nelson. "Educational Methodology for Workers of Self-Managed Enterprises." M.P.S. Research Project, Cornell University, Ithaca.

WICKS, Lyle W. and BERKEY, Arthur L. "Needs Assessment and Development of Instructional Materials for Teachers of Agriculture." Staff Study, Cornell University, Ithaca.

## OHIO

BENDER, Ralph E. "The 1977 Occupations of Recent Graduates of Vocational Agriculture in Ohio." Staff Study, The Ohio State University, Columbus.

BOUCHER, Leon W. "The Identification of a Teacher Profile Associated with Teacher Success in Vocational Agriculture." Staff Study, The Ohio State University, Columbus.

DICKENS, John. "Factors Associated with the Decision to Enter the Teaching of Vocational Agriculture." Doctor of Philosophy Dissertation, The Ohio State University, Columbus.

KING, Laretta. "The Effectiveness of Self Instructional Learning Packages With Young Adults." Doctor of Philosophy Dissertation, The Ohio State University, Columbus.

LARKIN, Willie. "An Analysis of the Methods and Techniques used by County Extension Agents to Measure the Personal Growth and Development of 4-H Club Members." Doctor of Philosophy Dissertation, The Ohio State University, Columbus.

MANTY, Dale E. "Transfer of Public Participation Education and Communication Technology to Help Implement Coastal Zone Management Programs: Development of a Paradigm for Designing Public Communication Programs." Doctor of Philosophy Dissertation, The Ohio State University, Columbus.

McCRACKEN, J. David and BURNETT, Michael F. "Occupational Analysis of Selected Positions in Agribusiness." Staff Study, The Ohio State University, Columbus.

MOORE, Lucinda B. "Competencies in Small Animal Care Occupations." Master's Thesis, The Ohio State University, Columbus.

MORTON, Ray. "Relationship of Supervised Occupational Experience Program Involvement and Learning by Students." Doctor of Philosophy Dissertation, The Ohio State University, Columbus.

OREGON

BELLAMY, Bill. "Adult Agricultural Education Needs in Central Oregon." M.Ed. Thesis, Oregon State University, Corvallis.

COLE, R.L. "Identification of Critical Work Activities for Vocational Agriculture Teachers." Staff Study, Oregon State University, Corvallis.

DEEDS, Jacque. "An Assessment of State Program Standards In Oregon Vocational Agriculture Programs." M.Ed. Thesis, Oregon State University, Corvallis.

FINE, John. "Adult Agricultural Education Needs in Douglas County." M.Ed. Thesis, Oregon State University, Corvallis.

HALL, Dave. "Animal Science Competencies Needed By Vocational-Agriculture Program Graduates in Wallowa County." M.Ed. Thesis, Oregon State University, Corvallis.

HOPFER, Mark. "Sheep Production Competencies Needed by Vocational-Agriculture Program Graduates in Dougals County." M.Ed. Thesis, Oregon State University, Corvallis.

OADES, John D. "Sources of Technical Agriculture Skills for Vocational Agriculture Teacher Trainees." Staff Study, Oregon State University, Corvallis.

WILKINSON, Ron. "An Assessment of State FFA Contests in Oregon." M.Ed. Thesis, Oregon State University, Corvallis.

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BROWN, Herman and ERMIS, Larry. "An Assessment of the Basic Curriculum Guide for Production Agriculture in Texas." Staff Study, Texas A&M University, College Station.

HUDSON, William E. "Inventory and Analysis of Professional Tasks Engaged in by Teachers of Vocational Agriculture in the Secondary Schools of New Mexico." Ph.D. Dissertation, Texas A&M University, College Station.

KOTRLIK, Joe W. "Suitability of Available Student Materials for Group and Individual Instructional Purposes in Texas Vocational Agriculture Programs." Ph.D. Dissertation, Texas A&M University, College Station.

LEDESMA, Rafael. "Role Perception and Attitudes of Dominican Republic Extension Agents." Ph.D. Dissertation, Texas A&M University, College Station.

MITCHELL, Michael K. "Perceived Importance and Relative Time Spend on Tasks Performed by Secondary Cooperative Vocational Coordinator." Ph.D. Dissertation, Texas A&M University, College Station.

SCANDARANI, Muhei. "Sources of Information Affecting Adoption of Differed Grazing Systems as a Range Improvement Tool by Selected Texas Ranchers." Ph.D. Dissertation, Texas A&M University, College Station.

WALKER, Colvin N. "An Appraisal of the Supervised Experience Program Record Book Adopted in Texas Vocational Agriculture Programs." Ed.D. Dissertation, Texas A&M College Station.

WEBB, Earl and VACLAVIN, Randy M. "Guidelines for Operating and Administering Multiple Teacher Departments of Vocational Agriculture in Texas." Staff Study, Texas A&M University, College Station.

## WEST VIRGINIA

CULLEN, John William. "Parental Opinions of Vocational Agriculture." M.S. Thesis, West Virginia University, Morgantown.

LIU, Jen-jyh. "Factors Which Agricultural College Students Consider Important in a Job." M.S. Thesis, West Virginia University, Morgantown.

WATSON, Larry W. "The Efficacy of Education Gaming in Teaching Vocational Agriculture." M.S. Thesis, West Virginia University, Morgantown.

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